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Editorials

Blood Vessel Surgery in War

INJURIES to large blood vessels present the immediate problem of control of hemorrhage. The corollary subsequent problems are concerned with concomitant injuries as well as the preservation of life in the part supplied by the vessels. The choice of the type of management in such cases will be influenced to a considerable extent by what experience has shown to give the greatest number of good results in each particular instance. The surgeon must have at his command the execution of the various procedures which may be demanded by the exigency of the situation.

The complications and sequelae of the initial injuries, such as secondary hemorrhage, necrosis or gangrene of the part supplied by the vessel and ultimately the appearance of arterial hematomas, traumatic aneurysms and arteriovenous fistulae, demand familiarity and particular training in this field of surgery.

Neurologic surgery, thoracic surgery and bone and joint surgery have been developed to a much higher degree of efficiency in the majority of our surgical teaching centers than has vascular surgery. The present war will require the services of a large number of men trained in the latter field. My own observations have convinced me that very

few surgeons have found vascular surgery alluring enough to warrant an application sufficient for the mastery of the principles upon which successful treatment in this field depends.

Since the last war there have been at least two important contributions to the armamentaria of the surgeon faced with the many problems attendant on blood vessel injury. While they are undoubtedly significant aids to the surgeon, excessive reliance should not be placed on these to the neglect of the basic principles of meticulous surgery.

The introduction of the sulfonamid drugs, with their extolled virtues of preventing infection, may greatly increase the scope of application of restorative vascular surgery. Heretofore the presence of a contaminated wound or of impending or actual infection have been considered indications for the employment of obliterative procedures rather than the more dramatic restorative suture of vessels with their risk of secondary hemorrhage.

The use of blood banks and plasma reserves will aid materially in handling vascular injuries. The fact that these life saving fluids are available in liberal quantities, however, does not relieve the surgeon of the responsibility of being thoroughly familiar with all the methods of provisional control of the vessels involved at the time of surgical intervention.

Too often the casual operator invades what appears to be an unimportant vascular injury only to find that when a missile is removed or a small clot extracted, he is in the midst of profuse hemorrhage and in the presence of an injury to an important blood vessel of the neck or extremities. When confronted with this unexpected crisis, his expected results become serious consequences.

The frequency of blood vessel trauma in blast and missile injuries would suggest that all civilian as well as military surgeons take time to review the fundamental principles underlying successful management of these conditions. Otherwise they are likely to find themselves indecisive and technically inefficient in the face of the embarrassing necessity of undertaking a type of surgery which admits of no delay and demands the utmost technical skill.

Experience convinces one that too much emphasis cannot be placed on the fact that in the majority of instances the best interests of the patient will be served by conservative obliterative types of ligature or sutures. The more spectacular restorative suture, which requires infinitely greater technical ability, exacts a high toll of lives in the event of failure, and should be used only under the most favorable conditions.

RAYMOND W. MCNEALY, M.D.

INTERNATIONAL COLLEGE OF SURGEONS

For information concerning membership in the International College of Surgeons, write to Mr. Ralph Osborne, Business Secretary, International College of Surgeons, 1512 Spruce St., Philadelphia.

Progress

DURING the National Assembly of the United States Chapter of the International College of Surgeons, held at Denver, Colorado, a meeting of the Board of Governors was held, during which the education of the younger men was further discussed. Among the many facets of such activities the question of the perpetuation of a post graduate course during the coming year was analyzed, and Drs. MacGregor and Arnold were empowered to designate the locality in the midwest or west for each course or courses, the instructors to be provided by the Committee, of which the writer has the honor of being Chairman.

Deficits resulting from such activities will be neutralized from the Educational Fund set aside in the College budget.

The members of the Board of Governors, and particularly Drs. MacGregor and Arnold, deserve much credit for their splendid cooperation and work done with regard to our activities in the west and northwest. The writer recommended to the Assembly that Dr. MacGregor be made Vice-Chairman of the Board of Governors and he also wishes in this connection to express his gratitude to the Council of the United States Chapter of the International College of Surgeons for appropriating and setting aside in their budget a sum of money to be used for educational purposes, and to be used whenever and wherever, in the judgment of the Educational Committee, it is most desirable.

FRED M. DOUGLASS, M.D.
Chairman.

The Uterus as a Content of Inguinal Herniae in Men

IT WOULD seem almost fantastic to say that a uterus was found in the inguinal hernial sac of a fully developed young male adult. Yet such a case is reported by Olof Nilson (Acta Chirurgica Scandinavica, vol. lxxxiii, 1939-1940, page 231) and he refers to other reported cases. Out of 99 published cases reported by Motiloff in 1931, 33 cases of uterine content of inguinal sacs occurred in males and only 66 in females. That fully one-third of all the cases reported were found in males is a most striking fact and leads one to ask how many males are walking about with female organs snugly tucked away somewhere in the pelvic cavity without giving any signs of their presence. Motiloff states that 21 of the 33 male subjects were men endowed with normal male sex glands and entirely normal male external genitals.

Nilson's patient was born with a right-sided inguinal hernia and had worn some kind of truss for the first 18 months of his life. At 15 he developed a hernia on the left side which filled the scrotum and latterly became much enlarged. The scrotal contents were easily reducible but in the upper canal some abnormal structures could be felt after reduction of all the rest. At no time was there any evidence of strangulation. The man was a sexually normal male, he enjoyed coitus, but was not married and had no children. He had entirely normal characteristics. The report does not say whether or not the semen contained viable spermatozoa.

On the right side (the congenital her-

nia) the testis was not palpable. The patient thought the truss he had worn in infancy had pushed it back into the abnominal cavity. On the left side an apparently normal testis could be felt in addition to a hernial mass the size of a goose egg. The penis and prostate were apparently normal in size and form.

At operation on this side, after a large piece of omentum had been replaced, a uterus about half the normal size was found fixed at the level of the external ring. Traced deeper, the uterus was felt as a band about the size of the little finger descending into the pelvis and from it there sprung from each cornu a structure exactly in appearance like a broad ligament, tube and ovary. On the left side these adnexa lay in the scrotum, but on the right side were intraabdominal, though they could be brought up out of the wound. The uterus was amputated "supra-vaginally" and was excised together with the left tube and sex gland. The right sex gland was laid back in the abdomen and left in place. Microscopically, both of these glands were of normal testicular structure. The left showed every stage of spermatogenesis up to the mature spermatozoa in its seminiferous tubules. A similar study of the right (undescended) testis showed no sign of spermatogenesis. No trace of ovarian tissue was found anywhere.

The removed specimen consisted of a supravaginally amputated uterus whose adnexa, though small, were entirely similar to those of the normal woman, with the exception that an epididymis and a vas deferens ran in the broad ligament below the tube. The uterus was covered in front, above and on the upper third of its posterior surface by peritoneum. Its greatest breadth was 37 millimeters, length 28 millimeters and thickness 20 millimeters. The arrangement of its muscular fibres was that of the ordinary female uterus. The uterine endometrium showed no evidence of the slightest ovarian influence. Uterine arteries the thickness of woolen threads ran up on each side of it. The left Fallopian tube was 76 millimeters long, possessed fimbriae one to two millimeters in length and was patent in its length to a probe.

The case is reported as a true instance of inguinal herniation of the uterus in a male. Nilson feels that the condition should be capable of correct diagnosis before operation, in a well-marked case like this.

Masculine pseudohermaphroditism is defined as a condition in which in a male possessing testes and normal external male genitals, the Müllerian ducts have developed in the feminine type. The recorded case would seem to represent the extreme degree in which a well-formed uterus and tubes lay between the bladder and the rectum and communicated with the prostatic urethra by means of a miniature vagina. That those individuals who have such organs are definitely male and masculine is evidenced by the fact that many of them, as reported by Motiloff, were married and one at least was the father of eight children.

It is worthy of note that the descent of the uterus into the scrotum occurred on the apparently normal left side in which there already was a normal testis, instead of the right side with the congenital hernia and the undescended testis; also it is worthy of note that the descent of the uterus occurred at the age of puberty. It is curious that there is no history of loss of blood from the urethra or of anything suggestive of vicarious menstruation, but this is probably due to the undeveloped uterus and the absence of ovaries or ovarian tissue.

Treatment was directed to the retention of the male glands in their full functioning capacity and the removal of the uterus as a useless organ. Nilson points

out that it is difficult to remove the uterus and relieve the hernia without thereby depriving the patient of his chance of fatherhood. It is therefore a delicate matter of judgment on the part of the surgeon whether his patient will gain or lose in the long run by having the radical operation performed.

A. L. WOLBARST.

Honoris Causa

THE recognition of 'Deeds Well Done,' accomplishments in science, attainment in literary pursuits, acts of consequence in the uplifting and ideals of mankind, the cultural strength among men and the nations they represent—in fact the entire assets of human endeavor—call for adequate expression of acknowledgment of due and fitting tribute where tribute is due, and still further, the very stimulus created by tokens of estimate of merit, fortifies the onward spirit of co-operation and the intellectual nourishment. Bestowing honors upon toiling humanity in diversified intellectualities in men of science and of the arts, in Heroic Valor, or in prose and poetry, bespeaks the gift of man to his fellowmen.

The Golden Fleece, the Fleur-de-Lis, the Cordon or Cross of the Legion of Honor, the Laurel Wreath of the Romans, and the sundry emblems and symbols betoken that sense of obligation for the reward of merit expressed in days gone by, as history records the compensation accorded to those who by their talent and effort have added to the wealth of life, that when the sun, the moon and the stars have paled in God's eternal day, the spiritual richness will go on and on, ad infinitum. Thus one honors and recognizes meritorious deeds and accomplishments, promoting and encouraging individual initiative and aspiration for the things worth while. "It blesses him that giveth, and him that taketh."

The International College of Surgeons, in its universal scope, strives to arouse constructive international intercourse and fellowship among the gifted and talented, to appreciate the light of scientific surgery among men of medicine, of all nationalities, for the benefit of humanity primarily, and for the young surgeon now and in the generations to come.

The International College of Surgeons strives to encourage scientific effort in all its various activities, omitting no opportunity to express its esteem and evaluation of all outstanding personalities, not only among those of our membership who by their pre-eminence reflect credit on our organization, but also to those outstanding personalities in public life, in political, religious and economic leadership who, by their patronage and interest in our College, contribute in a large measure to our prestige and influence among the agencies of progress.

The large-minded, liberal and universal principles which motivate and impel the International College of Surgeons to

confer Honorary Fellowships outside medical boundaries result from the favor, good will and patronage and the manifest interest evinced by national executives in Latin American countries where the International College of Surgeons has enjoyed gracious hospitality, privileges and advantages.

Fellowship (Honoris Causa) binds in community of interest and effort, the humanitarian objectives as well as the cultural aims of scholars, academicians and men in public life throughout the world.

DESIDERIO ROMÁN.

NEWS ITEMS

HONORARY FELLOWSHIP TO PROFESSOR BURDENKO

At a conference of the Medical Section, U.S.S.R., on September 25th, the Society of Cultural Relations presented a certificate and insignia, as well as the medallion for Honorary Fellowship of the International College of Surgeons to Academician Nicolai Burdenko, Chief Surgeon of the Red Army. The presentation occurred in the presence of eminent Soviet medical men.

Professor Burdenko responded as follows: "It is difficult for me to speak, yet I feel the need of expressing my feelings in a few words. I cherish the honor conferred upon me, but I do not attribute this to my personal merits—this tribute is paid to the work of those Soviet Surgeons who deserve world recognition. This also strengthens the friendship between the Soviet and American people in their struggle against a common foe. I will apply all my strength to uphold the honor of Soviet surgery."

Reports on activities of the American and English organizations for Russian War Relief were given at the Conference. The Chiefs of the respective Departments apprized the Section of the gifts of medical instruments, medicines, etc., received from the United States of America and Great Britain. The question of further development of association between the medical workers of the allied countries, organization for the exchange of information, scientific works, literature, etc., was discussed.

DR. MANUEL MANZANILLA HONORED

Dr. Manuel Manzanilla, Vice-President of the International College of Surgeons and National Regent of the Mexican Chapter, has been made a member of the Supreme Council for National Defense of the United States of Mexico. This Supreme Council is presided over by His Excellency, the President of the Republic.

Dr. Moses Behrend has been appointed Associate in Surgery at Jefferson Medical College.

A Victory Flag was recently raised over the **Hoffman-La Roche** Plant in Nutley, New Jersey, symbolizing the adoption of the payroll deduction plan for the purchase of Defense Savings Bonds by the entire personnel. Their bond purchases will total $100,000 a year.

The **Abbott Laboratories** of North Chicago, Illinois, received the Army-Navy "E" award for their distinguished service to America's all-out war effort. Dr. Morris Fishbein was Master of Ceremonies in the official presentation of the pennant on September 21st, in the presence of more than 2,000 employees and distinguished guests.

(Continued on page 393)

Diagnostic and Prognostic Surgical Pathology*

WILLIAM CARPENTER MacCARTY, Sr., M.D., F.A.C.S., F.I.C.S. (Hon.)
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IN THE lives of most of us certain individuals and their services to humanity stand out as beacons which have served to guide us in our own careers. Having been interested in pathology and surgery during my student days, and for many years since, I have been influenced especially by the contributions to both subjects by Nélaton (1807-1873) [15] and Broca (1824-1840)[2, 3] in France, Billroth (1827-1894)[1] in Germany, Paget (1814-1899)[16, 17] in England, Macewen (1848-1924)[14] in Scotland and England, and Halsted (1852-1922)[8], Kelly (1858-)[9, 10, 11] and Cullen (1868-)[4, 5, 6, 7] in the United States; all of these surgeons and many others have contributed definitely to our knowledge of pathology as it applies to surgical diagnosis and treatment.

Many changes have occurred in both surgery and pathology. You are aware of the fact that up to the twentieth century surgery was almost purely technical and had only anatomy for its foundation; many great surgeons of the past have been also teachers of anatomy. In the last fifty years the pathology of Rokitansky (1804-1878)[18] and Virchow (1821-1902),[19, 20] which was morbid anatomy, has become not morbid anatomy alone but also bacteriology, parasitology, serology, immunology, hematology, clinical pathology, chemical pathology, physical pathology, experimental pathology, oncology, and surgical pathology. No longer can one individual be master of all branches of pathology. Even surgical pathology has changed both as to material and function; up to the second decade of this century it consisted largely of descriptions of wounds, material removed surgically, and the collection of surgical specimens to form museums for study and illustration in class rooms and textbooks; the specimens removed were all in the advanced stages of disease, and most of the tumors were quite large.

At the beginning of this century operative surgery was in its infancy and awaited the further development of bacteriology, anesthesia, roentgenology, and operative technics. Intra-abdominal, intracranial, and intrathoracic explorations were done only as extreme procedures by the most daring surgeons and even then with some hesitation. Legs and arms were amputated for large incapacitating neoplastic conditions but were rarely, if ever, explored for microscopic diagnosis. Gastrointestinal cancers were usually very large when recognized by signs and symptoms and submitted to the surgeon merely as a last resort. In 1900 Osler and McCrea reported 150 gastric cancers of which only nine were explored surgically. Six were merely explored, were hopeless and died; one had a gastroenterostomy and died; one had a gastrostomy and died; and one had a partial resection and died. The operative mortality in this series was 100 per cent.

Today typical clinical textbook pictures of gastric cancer and all other diseases are rapidly disappearing due probably to the facts that laymen have become disease conscious, are responding to the professional advice to come to the physician early with their troubles,

*Read before the meeting of the International College of Surgeons, Denver, Colorado, July 15 to 18, 1942.

and to the fact that the physicians themselves are increasingly more willing to send their patients to surgeons for explorations. Today clinical diagnoses are less specific as to what is actually present; they are becoming more and more regional with a request for exploration —the diagnosis and prognosis being left to the surgical pathologist whose function seems to be not merely to describe specimens after their removal, as did early surgical pathologists, but to actually make the diagnosis and determine the extent of the necessary treatment.

Let us look at some facts which substantiate the statements which I have made. Since 1907 I have measured and weighed all neoplastic lesions removed at the Mayo Clinic.[12, 13] Uterine fibromyomas in 1912 had an average weight of 1533 grams; in 1941 the average was 320 grams. In 1912 the ovarian tumors average 4410 grams and in 1941, 550 grams. Thus it may be seen that the fibromyomas were approximately four to five times larger and the ovarian tumors approximately eight times larger. These figures probably mean the women are coming to the doctors long before their tumors become large and have characteristic signs and symptoms; they either become conscious that something is wrong or they have greater faith in the medical profession, or perhaps both. The figures also suggest, in view of the fact that some of the tumors are much smaller than the average, that physicians and surgeons are more willing to explore regions without detailed morbid anatomical organic diagnoses: Clinical diagnoses of fibroids of the uterus sometimes turn out to be ovarian or tubal tumors, uterine adenomyomas or polyps (benign and malignant), sometimes carcinomas of the uterine body or ovary, sarcomas, and—fortunately very rarely—pregnant uteri.

In the gastrointestinal tract the change in average size has not been quite as striking probably for the simple reason that neoplastic lesions in this region rarely become large before causing partial or complete obstruction with great discomfort. We find, in a series of measurements of resected gastric carcinomas, in a period of twenty-four years (1917 to 1941) during the first ten years 8.2 per cent were 2.5 cm. or under in diameter, in the last ten years of that period 10.1 per cent and in the last five years of that period 13.3 per cent (Fig. 1). It is interesting to note that in 1941 the percentage rose to 15.7. This

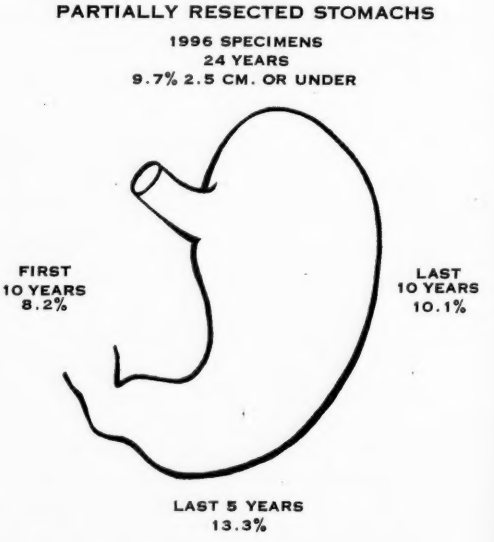

Figure 1.

again suggests the probability that more patients are coming early to the physicians with their gastric or epigastric troubles, that more general practitioners are having their patients studied roentgenoscopically, and that more are being explored with small gastric lesions with and without a positive clinical preoperative diagnosis of whether the condition

is malignant or not. As a matter of fact, in the clinic 50 per cent of all gastric resected specimens are malignant, the other 50 per cent being found to be benign ulcers only after excision or resection and microscopic study.

In the same period in which rectal and rectosigmoidal cancers were studied similar facts were seen: there are almost twice as many small cancers suspected, discovered and removed (Fig. 2). In the rest of the large intestine there also is an increase amounting to three times as many (Fig. 3).

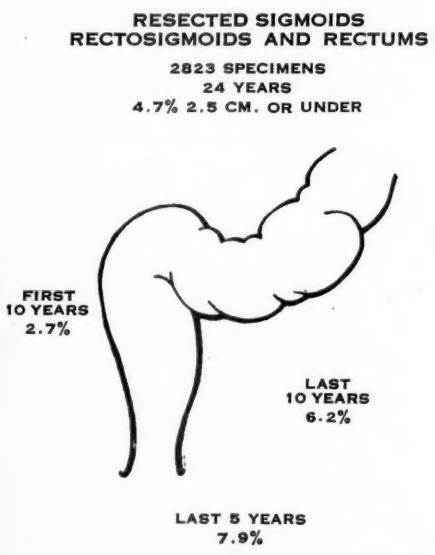

Figure 2.

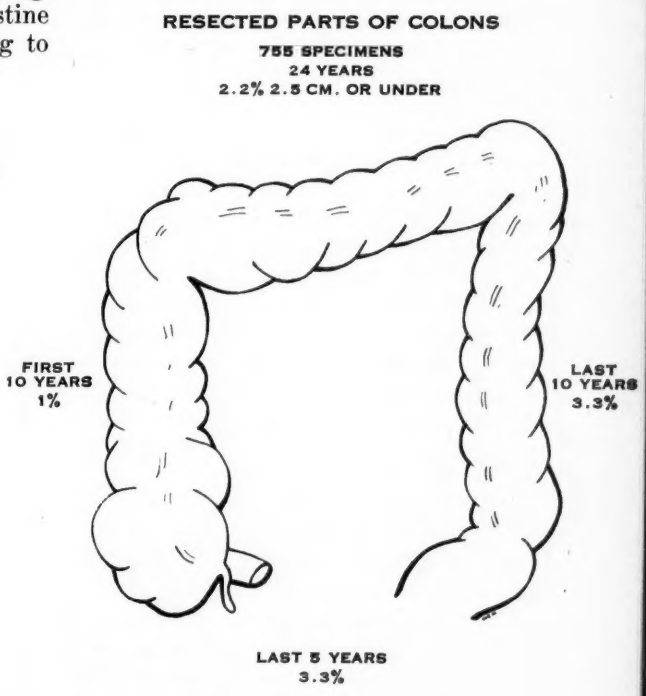

Figure 3.

If we turn now away from the abdominal cavity and concentrate on the breast which is about as visible and palpable as any organ of the body, we find some facts more striking and more suggestive of the theme of my presentation. In 1917 mammary pathologic conditions came to the surgeon with 84.8 per cent of the clinical diagnoses positive for malignancy or benignancy. In 1919 this had changed to 72.3 per cent, in 1925 to 62.6 per cent, in 1938 to 45 per cent and in 1941 to 38 per cent. This suggests that the lesions are smaller, and the examining physicians are not so willing to make detailed positive clinical diagnoses; they advise removal of the growth, or suspicious area for diagnosis by the surgical pathologist who in our institution is always in intimate contact with the operating rooms and the surgeons; the clinician's favorite preoperative expressions are "tumor of the breast," "nodule," "excise for diagnosis," "radical if malignant." On the day I finished writing this last sentence I saw three patients with mammary lesions which were thought, from clinical textbook signs and symptoms, to be benign. The masses (in one case

multiple) had all the textbook pictures of benign conditions but fortunately the masses were removed, diagnosed microscopically immediately, and radical surgery was done because they were malignant. The profession is becoming somewhat skeptical of its ability to evaluate correctly small lesions which do not present the clinical textbook pictures; they have even learned that these pictures are not always correct in actual practice; benign as well as malignant conditions are associated sometimes with retraction of the nipple, dimpling of the skin, fixation, hardness, and even discoloration of the skin; it has learned that all multiple lesions are not necessarily benign cysts or fibro-epithelial tumors; sometimes multiple lesions are malignant; it has learned that age and the duration of the lesion are not always helpful in deciding whether a mammary lesion is benign or malignant—very young people may have cancers in the breast and other locations and middle aged and old people may have benign conditions. This is more frequent than ordinarily thought and taught.

Over a long period of years (1917 to 1941) I have checked the positive neoplastic clinical diagnoses and found that in the breast when the diagnoses are positive for malignancy the percentage of incorrect diagnoses remains about the same: in 1917 it was 5.8 per cent; 1919, 5.1 per cent; 1925, 7.3 per cent; in 1938, 6 per cent; and in 1941, 6 per cent. If the diagnoses were positive for benignancy the preoperative diagnostic guesses were not quite as good and there was a greater variation from year to year: in 1917, 9 per cent turned out to be malignant; 1919, 13.4 per cent; 1925, 9.9 per cent; 1938, 2.2 per cent; and in 1941 no per cent. Perhaps the reason for the exceptionally good guessing in recent years (1938 to 1941) was due to the fact that our clinicians have stopped guessing and have relied upon removal of the suspected areas for diagnosis in practically all mammary conditions.

I feel confident that the training of the profession of recent years has been much better than it ever has been in the history of medicine; I am equally positive that the descriptions and interpretations of pioneer surgical pathologists were very good indeed; and I am just as certain that there has been a great change in our material for clinical diagnosis with a decrease in our ability to determine the pathogenicity of the smaller and earlier lesions we are seeing. We have become dependent upon many laboratory specialists for aid in diagnosis and among these the clinical surgical pathologist has become very important; he is no longer a surgeon who is interested only in typical surgical pathologic conditions (wound healing, anatomical anomalies and typical neoplasms); he has become a clinical diagnostician and prognostician, familiar not only with morbid anatomy but with disease processes and medical and surgical diagnostic and therapeutic procedures; he has become more than a postmortem morbid anatomist and histopathologist; he has become a fresh tissue cytologist who adds much to histopathology which has been the foundation of general and surgical pathology of the past. I am certain that a morbid anatomist trained only at the autopsy table and armed merely with the low powers of the microscope cannot offer the most efficient aid to the diagnostic clinician, surgeon, and the patient any more than all chauffeurs can become good aviators.

The practical attitude seems to have been taken in the following case: I was called by telephone about a man who had had a gastric hemorrhage followed by an anemia. This man had an angioma of the tongue and the question arose in

the clinician's mind, could the esophageal (?) or gastric (?) or duodenal (?) hemorrhage be due also to an angioma? It seemed to me a positive clinical pathological diagnosis could not be made and that the only practical advice to give was to have a roentgenoscopic examination to determine the location and size of the lesion, if one were present, decide whether it was operable or not, whether the patient was able to withstand the operation, and whether we had a surgeon capable of operating for the condition. This advice was followed and the source of the hemorrhage was found to be a resectable myosarcoma instead of an angioma upon microscopic examination made during the exploration.

Upon an occasion I saw two women at the same time, an aunt and her niece, one about fifty-five years of age and the other in her twenties. The older one knew she had a mammary tumor, the younger one did not know she had a tumor; she was merely company for her aunt. Purely incidentally the niece had her breast examined. The two patients were sent to the operating rooms at the same time, the older one marked "malignant (?)" and the younger one "benign (?)." In both cases the clinical advice was to remove the tumors for diagnosis. The one clinically diagnosed "malignant (?)" was benign and the other one was malignant. The niece went away with a radical amputation of the breast and her aunt with her breast intact excepting for the scar of a local excision. Hundreds of such personal examples might be given; this is not a rare experience but one which occurs almost daily, with increasing frequency.

In conclusion may I quote Billroth, who in one of his lectures on surgical pathology quoted from the Sanskrit Ayur Veda: "Only the union of medicine and surgery forms a complete physician. The physician whose knowledge stems from only one of these branches is like a bird with one wing." It might be added in the second quarter of the twentieth century that the practice of medicine and surgery without a well trained, active clinically-minded diagnostic and prognostic surgical pathologist who is a fresh tissue cytologist constantly at hand or always near the operating room is like handling an airplane with two wings but without a rudder.

SUMMARY

Many changes have occurred in surgery, pathology and methods of clinical diagnosis. Neoplastic conditions are much smaller when seen by physicians. The diagnosis based on signs, symptoms and even gross morbid anatomy is becoming, therefore, more difficult. This I have shown from actual experience with lesions of the breast, stomach and large intestine, ovary and uterus. Biopsy and surgical explorations have become clinical diagnostic procedures. The function of the clinician is to decide whether the condition is medical or surgical, and if surgical, where to make the incision for exploration, whether the risk is too great, and whether there is an efficient surgeon present. Detailed diagnosis is being replaced by prognosis—prognosis if nothing is done, prognosis if something is done, and whether what is done will prolong useful and happy life.

"Only the union of medicine and surgery forms a complete physician. The physician whose knowledge stems from only one of these branches is like a bird with one wing." (Billroth, quoting from the Sanskrit Ayur Veda).

In the twentieth century the practice of medicine and surgery without the clinical surgical pathologist who is a cytologist is like flying an airplane with two wings, without a rudder.

BIBLIOGRAPHY

1. Billroth, Theodor, Die allgemeine chirurgische Pathologie und Therapie. Berlin, 1863.
2. Broca, Paul, Bull. Soc. d'anthrop. de Paris. ii. 235-238. 1861.
3. Broca, Paul, Remarques sur le siége de la faculté du langage articulé; suives d'une observation d'aphémie (perte de la parole). Bull. Soc. anat. de Paris. 36:330-364, 1861; Nouvelle observation d'aphémie produite par une lésion de la moité postérieure des deuxième et troisiéme circonvolutions frontales. 398-407.
4. Cullen, T. S., Cancer of the uterus. New York, D. Appleton & Company, 693 pp. 1900.
5. Cullen, T. S., Adeno-myome des Uterus. Berlin, A. Hirschwald, 91 pp. 1903.
6. Cullen, T. S., Adenomyoma of the uterus. Philadelphia, W. B. Saunders Company, 270 pp. 1908.
7. Cullen, T. S., Embryology, anatomy and disease of the umbilicus together with diseases of the urachus. Philadelphia, W. B. Saunders Company, 701 pp. 1916.
8. Halsted, W. S., Personal communication to the author.
9. Kelly, H. A., Operative gynecology, New York, D. Appleton & Company, vol. 1, 563 pp. 1898.
10. Kelly, H. A., Medical gynecology. 1908.
11. Kelly, H. A., Carcinoma of appendix.
12. MacCarty, W. C. and Conner, H. M., Clinical efficiency and terminology in cancer of the breast. Surg., Gynec. & Obst. 29:44-51 (July) 1919.
13. MacCarty, W. C., The size of operable cancers. (A study of 7179 specimens.) Am. J. Cancer. 17:25-33 (Jan.) 1933.
14. Macewen, William, Pyogenic infective diseases of the brain and spinal cord. New York, The Macmillan Company, 354 pp. 1893.
15. Nélaton, Auguste, Éléments de pathologie chirurgicale, 1844-1859.
16. Paget, James, Lectures on tumours. 1851.
17. Paget, James, Surgical pathology. 1863.
18. Rokitansky, Carl, Handbuch der pathologischen Anatomie. Vienna, Braümuller & Seidel, 3 vols. 1842-1846.
19. Virchow, Rudolf, Cellular Pathologie. 1858.
20. Virchow, Rudolf, Die Krankhaften Geschwülste. Berlin, A. Hirschwald, 3 vols. 1863-1867.

SUMARIO

Muchos cambios han ocurrido en cirugía, patología y métodos de diagnóstico clínicos. Condiciones neoplasticas son mucho menos observadas por el médico: El diagnóstico basado en signos, síntomas y aun anatomía gruesa mórbida se está volviendo mas dificultoso. Esto yo lo he mostrado por experiencia actual de lesiones del pecho, estómago e intestino grueso, ovario y útero. Biopsia y exploración quirrúrgica se han convertido en procedures diagnósticos. La funcion del clínico es decidir si la condición es médica o quirurgica, y si quirúrgica, donde hacer la incisión para la explración, y si el riesgo es muy grande, y si hay un cirujano competente presente. Diagnostico detallado ha sido reemplazado por el prognostico—prognostico si nada se hace, prognosis si algo se hace, y si lo que es hecho prolongaria util y feliz vida.

"Solamente la union de medicina y cirugía forma un médico completo. El médico el cual su conocimiento se dirije a una de las remas de medicina se puede comparar a un pajaro con una sola ala." (Billroth, citando de Sanskrit Ayur Veda).

En el siglo veinte la practica de medicina y cirugía sin el patólogo clínico y quirurgica, quien es un citologísta es como volando un aereoplano con alas sin timon.

RÉSUMÉ

De nombreux changements sont survenus en chirurgie, en pathologie et en procédés de diagnostics. Les neoplasies ne sont plus aussi avancées de nos jours quand les malades se présentent aux médecins. Le diagnostic basé sur les signes, les symptômes et l'anatomie morbide décelable à l'oeil nu présente plus de difficultés. Cela est évident surtout dans les lésions du sein, de l'estomac, du gros intestin, de l'ovaire et de l'utérus. Le clinicien doit décider si la maladie est de nature médicale ou chirurgicale; si elle est d'ordre chirurgicale, l'incision à employer, les risques qu'entraîne l'opération, le choix d'un chirurgien compétent. En plus, il faut évaluer le pronostic si on opère, si on n'opère pas, si l'opération prolongera une vie utile et heureuse. "Ce n'est que par l'union de la médecine et de la chirurgie qu'on forme un médecin bien avisé. Celui qui s'éloigne d'une de ces branches est comme l'oiseau qui n'a qu'une aile." (Billroth Sancrit Ayur Veda). Au vingtième siècle d'exercer la médecine ou la chirurgie sans l'aide d'un pathologiste clinique qui est un cytologiste c'est comme d'essayer de voler en un aéroplane qui a deux ailes mais qui n'a pas de gouvern ail.

The Open Surgical Treatment of Tuberculous Cervical Abscesses with Skin Involvement*

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CIRCUMSTANCES do not permit me to present a formal paper, which was my hope and intention. I am, therefore, sending an idea for a practical form of surgical therapy which, I hope, will be found interesting and useful.

In the course of my duties connected with the tuberculosis service of the Kent County Council, a large number of cases of tuberculous cervical glands are referred to me.

Fig. 1. V. A., aged 10. When the large cavity filled with granulations three weeks after operation it was thought that skin grafting would be necessary.

For many years, in cases of collar-stud abscess, I have practised the following: By an oblique incision following the creases of the neck, the abscess cavity is opened and its wall excised. The small opening in the deep fascia is found enlarged, and the underlying glands dissected cleanly. After every vestige of necrotic material is dissected out, the whole cavity is swabbed with metaphen solution and the skin closed completely. After applying pressure with a sorbo sponge to prevent hematoma formation, a first intention scar is obtained in about 90 per cent of cases.

Fig. 2. V. A., five weeks after the operation. The large skin defect shown in the opposite figure was so filled in that skin grafting was not done. The wound healed. This photograph was taken three months after the operation.

When the stage of collar-stud abscess his progressed so far that the skin has become involved and/or sinuses have developed, it is a difficult problem to know how to deal best with the case. The very fact that such a case is re-

*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

ferred to the surgeon from a tuberculosis service implies that thorough conservative treatment has failed. When the skin is involved, the procedure outlined above is not successful in a high percentage of instances; the wound often breaks down with concomitant complications and unsightly scars.

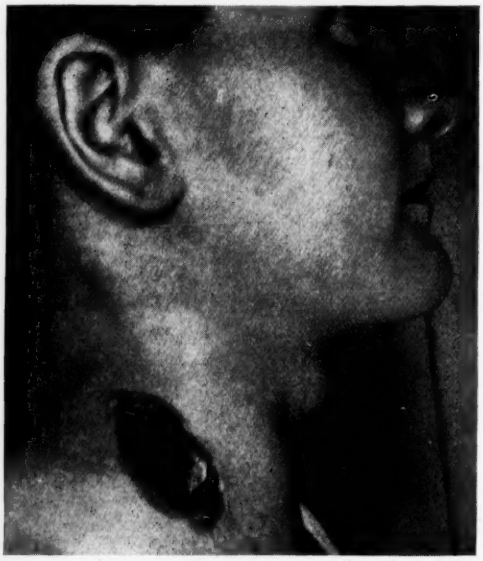

Fig. 3. Mrs. H. G., aged 26. Collar-stud abscess with skin involvement. Abscess cavity, diseased skin and the underlying glands dissected. Photograph shows the patient one week after filling the cavity with vaseline gauze.

About two years ago, in a case of particularly extensive skin involvement, I excised the unhealthy inflamed skin and removed the diseased glands. At the end of the operation the great vessels of the neck and a portion of the sternomastoid were quite bare. Heretofore I had undercut healthy skin in the endeavor to close the wound; in this instance such a procedure was impracticable. I therefore packed the wound lightly, using gauze moistened with cod liver oil, and applied a viscopaste bandage in such a way as to immobilize the neck. Instructions were given that the dressing should not be interfered with for a fortnight. When the dressing was removed I was surprised to note that the entire cavity, which before had displayed the great vessels of the neck, was lined and partially filled with granulations. Two weeks later the cavity had filled completely, and it was covered with skin grafts. Although only a few of the grafts survived, the wound continued to heal rapidly, and an excellent result ensued.

Fig. 4. Mrs. H. G., five months later.

Since that time I have become bolder in excising involved skin, and have treated cases in a similar manner many times. The only modifications, as time progressed, were that I have substituted sulphonamide powder for metaphen solution and vaseline gauze for the gauze impregnated with cod liver oil. This was only because these substances are more topical; the good results which have been achieved have been uniform throughout the series.

These patients have been operated upon in the country, where facilities for expert clinical photography are not

available. The photographic records are, therefore, not as complete as I should have wished, but I append a number of photographs illustrating the principles of this form of treatment. These photographs, for the most part, were taken by myself.

Fig. 5. F. W., aged 13. Tuberculous collar-stud abscess with massive skin involvement. Pre-operative photograph.

What astounds me more than anything else is that in a few weeks the large granulating area, with or without skin grafting, contracts to a linear scar. In the earlier cases Thiersch grafts were placed on the wounds when they had become filled with granulation tissue. In several instances, particularly those which had been treated by cod liver oil packing, the grafts did not take well, but in spite of this, excellent linear scars resulted. Latterly, I have omitted skin grafting altogether, and have sent the patients into the open air and what sunshine is available, with their wounds covered with a vaseline gauze dressing.

I cannot explain how the linear scar results from a large, rounded or triangular wound measuring, perhaps, three or four inches in diameter. So much skepticism has been expressed on my testimony in this country that I would not dare to record the observation if it could not be substantiated by the careful follow-up of the County Tuberculosis Officer and by photographic proof such as accompanies this communication.

Fig. 6. F. W., one week after operation, showing the large area of necrosed skin which was removed. The underlying glands were dissected. Cavities can be seen on either side of the sternomastoid muscle.

Fig. 7. F. W., five months later.

Fig. 8. D. L., aged 10. Collar-stud abscess with skin involvement and discharging sinus. Whole mass dissected out, including the submaxillary salivary gland. The photograph was taken one week after the operation. The posterior extremity of the wound was closed by three sutures. The remainder was left open and packed in the usual manner.

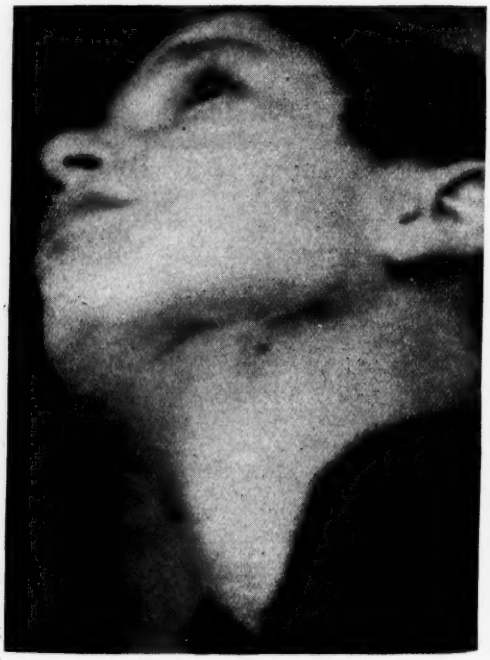

Fig. 9. D. L., four months after operation.

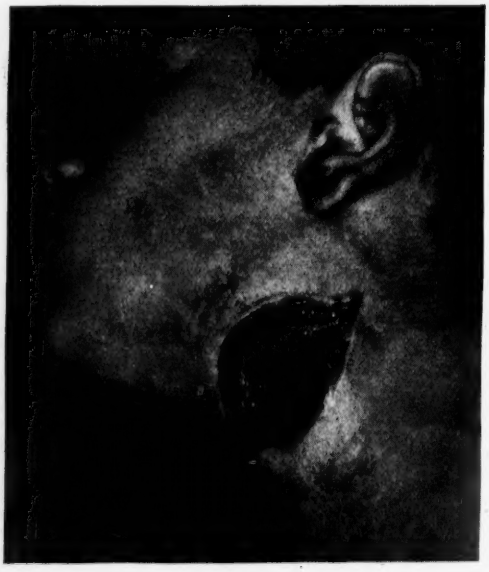

Fig. 10.

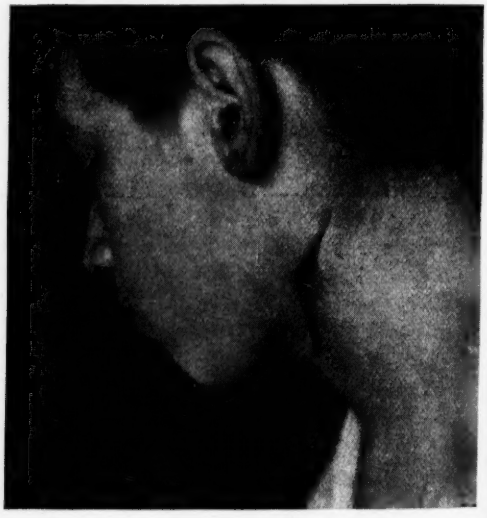

Fig. 11.

Fig. 10. J. R., aged 12. Two and a half years' history. When first seen, there was a sinus and a large area of unhealthy skin. After the underlying glands had been dissected out, an area of 4″x3½″ was left unsutured.

Fig. 11. J. R., three months later. This case is particularly instructive, as it shows the scar following the lines of stress first described by Kocher.

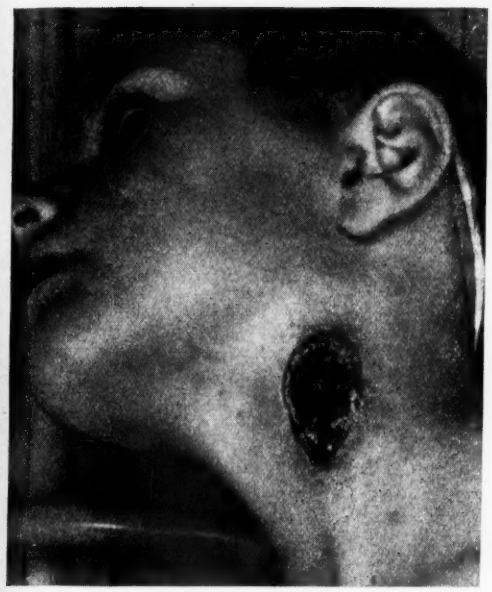

Fig. 12. V. T., aged 7. Unsutured wound one week after operation, after dissection of the underlying glands and unhealthy skin.

Fig. 13. V. T., four months later.

SUMMARY

In cases of collar-stud abscess, the involved skin was removed along with the diseased glands. Although the incision was oblique (following the neck creases), the resulting scar was always linear. Granulation occurred even when skin grafts did not take or were omitted entirely.

SUMARIO

En casos de abscesos de forma de boton de cuello, la piel afectada fué extirpada con la glandula enfermas. Aunque la insición fué oblicua (siguiendo el pliegue del cuello), la cicatríz resultante fué siempre lineal. Granulación ocurrió aun cuando el injerto de piel no prendio o cuando fué omitido completamente.

RÉSUMÉ

Dans les cas d'abcès en bouton-de chemise, on enleva la peau intéressée avec les glandes malades. Bien que l'incision fût oblique (suivant les sillons de la peau du cou), la cicatrice résultant fût toujours linéaire. Il y eut formation de granulations même dans les cas ou les greffes cutanées ne prirent pas racines et aussi dans les cas vù l'on n'employa pas de greffes cutanées.

CORRECTION

The editorial entitled "Now" in the preceding issue of the Journal is from the pen of Dr. Fred M. Douglass, Toledo, Ohio. His name was inadvertently omitted.

Movable Joints and Joint Movements*

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THE purposes of this paper are to reconsider the classification of freely movable joints in man, to establish a consistent, functional basis for such classification, to give precise definition to joint movements, and to examine in a general way the muscular mechanism which provides these movements. This does not signify that each joint in the human body will be described in detail, if at all, nor will each or any muscle group be scrutinized beyond the needs of the discussion at hand.

In the classification of movable joints offered here, the Greek composites frequently used to designate the various types of joints are mentioned in italics and parentheses, simply as a means of orienting this classification with previous ones. It is our view that these awkward and ill-advised derivatives have been a source of much confusion in the classification of joints, to which enterprise they appear to have added nothing but a burden of pedantry. Only functional, English terms are employed throughout this discussion, which terms appear as capitals in the following classification.

FREELY MOVABLE JOINTS (*diarthroses*)

1. NON-AXIAL OR GLIDING JOINTS *(arthrodiae)*
   Opposed surfaces of bones move freely against each other, but without inscribing an arc about an axis. Examples: most of the intercarpal and intertarsal joints, contacts between vertebral articular processes.
2. UNIAXIAL JOINTS
   One bone or bony component moves in relation to another in such a way as to inscribe an arc about an axis, which latter is either transverse or longitudinal to the joint.
   A. HINGE JOINT *(ginglymus)*
      The axis is transverse, as in the hinge to a box lid. Examples: knee, elbow, interphalangeal joints.
   B. ROTARY JOINT *(trochoid)*
      The axis is longitudinal, as in the pivot of a door hinge. Examples: atlanto-epistropheal joint; radio-ulnar joint, the proximal and distal parts considered as a single operating unit.
   C. GLIDING HINGE JOINT *(ginglymo-arthrodial)*
      There is rotation about a transverse axis as well as a gliding movement. Examples: temporo-mandibular joint; crico-thyroid joint.
   D. GLIDING ROTARY JOINT *(trocho-arthrodial)*
      There is rotation about a longitudinal axis as well as a gliding movement. Example: crico-arytenoid joints.
3. BIAXIAL JOINTS
   One bone or bony component may move in relation to another in such ways as to inscribe arcs about two axes at right angles to each other.
   A. KNUCKLE JOINTS *(condyloid)*
      An elliptical concavity articulates with an elliptical convexity (condyle). Examples: wrist joint; joints between condyles of the occipital bone and the atlas; metacarpo- and metatarso-phalangeal joints (except first).
   B. SADDLE JOINTS
      A concavo-convex surface articulates with a reciprocal surface.

* From the Department of Anatomy, University of Oklahoma School of Medicine.

Examples: carpo-metacarpal joint of the thumb; joint between the malleus and incus.

4. MULTIAXIAL JOINTS *(enarthrodial)* One bone or bony component may move in relation to another in such ways as to inscribe arcs about any axes. These joints are often called ball and socket, but they do not of necessity have a ball and socket configuration. The hip joint is the classical and complete ball and socket, also, but less so is the shoulder joint, whereas the sterno-clavicular and acromio-clavicular joints have nothing at all to suggest a ball and socket. Yet all these joints are multiaxial and must be so classified. Likewise the talo-navicular joint, often indiscriminately grouped with the other tarsal joints as gliding, does in fact inscribe arcs about all axes, therefore by definition is multiaxial. In the matter of configuration no other joint in the body, save the hip, forms such a perfect ball and socket. Finally, the incudostapedial joint must be considered multiaxial, though it is often—and, as it were, indolently—passed over as a diarthrosis. It can hardly be overemphasized that the term diarthrosis (Gr. *dia* = through + *arthron* = joint) has no literal interpretation, though by some vague extension it customarily refers to freely movable joints, and that is all it can possibly mean. Neither literally nor by extension does it imply any special function or specific classification.

Having classified, defined and cited examples of freely movable joints in the above outline, it is well at this time to give some consideration, however elementary, to the muscles which in their diverse fashion implement the skeletal levers of the body. From a practical, especially an orthopedic, point of view one of the most important things about a muscle is its action. Commonly and from long usage the immovable or less movable end of a muscle is the origin, the more movable end is the insertion. Actually the terms "origin" and "insertion" are often mere expedients of description. Many instances could be cited where the so-called insertion becomes fixed and the origin carries out the movement imparted by contraction of the muscle. In fact, most muscles are in some degree subject to this interchange of moving parts, depending on the circumstances which prevail at the time of contraction.

Or again, both ends of a muscle may remain relatively fixed, while the intermediate part of the muscle produces a given action; e.g., both temporal and mandibular ends of the digastric may remain fixed, yet the muscle can and often does contract, with the result that the intermediate tendon between anterior and posterior venters serves the important function of raising the hyoid bone, as in the first phase of deglutition. Another example is the rectus abdominis; when both thoracic and pelvic ends of this muscle are fixed, the muscle still contracts, in which case it serves, with other muscles of the abdominal wall, the familiar function of the "abdominal press."

The muscle which produces a given action, e.g., flexion of the elbow, is called the *agonist.* Other muscles which assist in the same action are *synergists,* and muscles which produce exactly the opposite action are *antagonists.* The term *agonist* is not widely used and is of doubtful value, unless it signifies the prime or most important muscle producing a given action, since otherwise any muscle producing any action is an agonist. Thus, in reference to flexion of the elbow, the biceps is the *agonist,* in the sense of prime mover, when the forearm is supinated, but in the same sense the brachialis is the *agonist* when the fore-

arm is pronated. Other muscles variously aiding in this action, therefore *synergists,* are the brachioradialis, extensor carpi radialis longus, extensor carpi radialis brevis, pronator teres and palmaris longus. The *antagonists* of these flexor muscles are of course the extensors of the elbow, e.g., the triceps and anconeus. Or, if extension of the forearm were being described, then the triceps would be the *agonist* or prime mover, the anconeus would be a *synergist,* and all the muscles named above as flexors would be *antagonists.* It should be noted in this connection that every normal joint movement is regulated by contraction of agonist and synergists against tonic control by antagonists. If this latter group of muscles becomes inactive, either from loss of its peripheral nerve supply by trauma or from central disturbance, then normal coordinated movement is no longer possible, even though the agonist and synergists remain unimpaired.

The movements imparted by muscles require precise definition in geometrical terms. In such terms the simplest type of movement to define—and often one of the most difficult to explain—is that of the contracting and expanding circle, or what is commonly called the sphincteric action. This type of movement is a widespread function of smooth muscle, but is also carried out by certain of the striated muscles, e.g., those about the orifices of the face, about the anal canal and about the urethra. Since the sphincteric action, however, does not involve or operate on the movable joints, it falls definitely outside the scope of the present paper.

Turning now to movements of joints whereby angular configurations are produced, these movements may usually be described in very simple terms. To take again as an example the elbow joint, a somewhat oblique hinge but none the less a typical uniaxial joint, the only movements of forearm in relation to upper arm are flexion and extension. Here *flexion* is any movement of the forearm in its own plane to or toward the upper arm, i.e., any reduction of the angle between the two components. The opposite movement, *extension,* is any movement of the forearm away from the upper arm, i.e., any increase of the angle between the two components.

To the above definitions of flexion and extension, there are some exceptions in the way of special cases. Thus, as to the shoulder and hip joints, which are multiaxial or ball and socket, to say that flexion is any angulation or angulation in any direction does not suffice. At the shoulder, as at the hip, the given extremity can move from a position parallel to the trunk around any axis to form any angle. Hence it becomes necessary to settle on some one direction of angular movement, if the term flexion is to have a precise meaning at all. This direction is taken as the plane of the upper arm or thigh parallel to the sagittal plane of the trunk. Forward angulation of the upper arm or thigh in this parasagittal plane is *flexion;* backward movement in this plane, i.e., away from flexion to or toward backward angulation, is *extension.*

Although one more special case of flexion-extension, that at the ankle, remains to be considered, it is well at this time to discuss the other types of movement exemplified at the shoulder and hip joints. If the arm or thigh is moved directly away from the sagittal plane of the trunk, thus inscribing an arc in a frontal plane, the movement so produced is *abduction.* The reverse movement of drawing the arm or thigh back through the frontal plane toward the midline of the trunk, or toward the prolongation of this midline, is *adduction.*

Now, since it is obvious that most movements at the shoulder and hip

joints do not lie exactly in the sagittal plane or in the frontal plane, it is necessary to speak of intermediate movements as flexion-adduction, extension-abduction, etc. When the four movements, flexion, extension, abduction and adduction, are combined in such a way as to generate a cone with its apex at the shoulder or hip joint and its base a circle traced by the elbow or knee, hand or foot, such a movement is *circumduction.* In uncomplicated form circumduction uses no other axes than those of flexion-extension and abduction-adduction. Practically, however, most movements at the shoulder and hip do use another axis; the arm does to greater or less degree rotate around its own linear axis; so does the thigh, and such movements are called, according to their direction, *medial* and *lateral rotation.* Thus there is at the shoulder and hip the multiaxial or tridimensional picture of *flexion, extension, abduction, adduction, medial rotation, lateral rotation,* and an infinite combination of these simple movements.

Since it is seen that the upper and lower extremities may assume any angular relation to the trunk, the terms flexion-extension and abduction-adduction, as defined above, are valid only for the segments of the extremities directly attached to the trunk, i.e., for the upper arm and thigh, so attached by their respective girdles. Other segments of the extremities, such as the hand and foot, have intrinsic movements which may bear any relations to the planes of the trunk, depending on the position of the given extremity as a whole. Therefore, movements of segments one or more removed from the trunk must be defined not in reference to the trunk at all, but on the basis of intrinsic relations. Thus the biaxial wrist permits flexion-extension as a simple angulation in the dorso-volar plane of the forearm; also the wrist permits abduction-adduction, where *abduction* of the hand is any radialward or ulnarward movement of the hand away from the midline of the forearm; and *adduction* is the reciprocal movement to or toward the midline of the forearm.

Also it will be seen that, without using any other movements than a combination of flexion-extension and abduction-adduction, the hand may generate a cone with apex at wrist and base at metacarpals or phalanges, thus carrying out *circumduction.* There is no possible question here of the hand rotating about its own axis, because the wrist joint does not permit such action. In practice, the crossing and uncrossing of the forearm bones (pronation-supination) contribute very much to the versatility of the hand, but the fact remains that even with the forearm bones immobilized (as in a cast) the hand is freely capable of circumduction.

What has been said of movements at the biaxial wrist may be repeated for the biaxial metacarpo-phalangeal joints. There are, however, a number of curious observations to be made on the hand. It will be seen that the metacarpo-phalangeal joint of the thumb is a uniaxial (hinge) joint, permitting only flexion-extension, whereas the like-named joints of the other fingers are biaxial, permitting both flexion-extension and abduction-adduction. But, it may be said, abduction-adduction of the thumb is certainly an action of considerable amplitude with specially designated muscles producing such action. So it is, but that action does not concern the so-called metacarpo-phalangeal joint of the thumb; rather it depends entirely on the unique saddle joint between the *base* of the first metacarpal and the greater multangular bone. Also — and parenthetically — it should be recalled that the epiphysis of the so-called metacarpal bone of the thumb is at the base, like that of any of

the phalanges, not at the capitulum as it is in each of the other metacarpal bones. So by functional and morphological count the three segments of the thumb are in effect homologous with the three phalanges of each of the other fingers, and the metacarpal element of the thumb is either completely suppressed or is represented by the greater multangular. Controversy has long centered about this question of homologous parts of the thumb, opposing argument usually stressing the muscular equipment of the metacarpo-phalangeal joint as indicating a definitive metacarpal status for the basal segment. In view of the propensity of muscles to migrate into diverse functional patterns, it is difficult to see how the question can be answered solely by a dialectic based on muscular arrangement.

Flexion-extension of the fingers, i.e., the phalanges, including those of the thumb, is a simple decreasing-increasing angulation in reference to the palm. Abduction-adduction is a movement strictly confined to the metacarpo-phalangeal joints of the fingers and the carpo-metacarpal joint of the thumb. Abduction is a spreading of the fingers away from the midline of the hand, this line falling along the middle finger in some hypothetical state of rest. This reservation must be made, because the middle finger can be drawn either radialward or ulnarward from its own midline. Adduction is the opposite movement of drawing the fingers, including the thumb, to, toward or beyond the midline of the middle finger. It might be assumed that the fingers have to start from abduction before they can be adducted. While this is often the case, it is not necessarily so. They may start from a position of complete contiguity, each parallel and in contact with its neighbor, and then be adducted across the middle finger, to such an extent that the index and little fingers touch or cross.

Wide amplitude of abduction-adduction is an extremely important function of the thumb, which may be opposed not only to the tips but also to any other palmar points and many dorsal points of the other fingers, as well as across the palm itself. However, this versatility of the thumb is primarily due to the saddle configuration of the first carpo-metacarpal joint.

There are some peculiarities of finger movements which merit attention here. Leaving out of account the thumb, it will be seen that the *extended* fingers have the capacity for very free abduction, as described above. But let the fingers be *flexed* at the metacarpo-phalangeal joints: the more they are flexed the less they can be abducted, until in a state of complete flexion they can not be abducted at all. An explanation of this restricted movement is to be found by examination of the metacarpal heads. In extension of the fingers the articular surfaces of the basal phalanges ride freely from side to side on the hemispherical heads of the metacarpals. But in complete flexion these same basal phalanges have left the hemispherical heads and have come into an area where the metacarpals are marked by low-lipped tubercles, which prevent any side-to-side motion of the basal phalanges. Accordingly it must be said that the metacarpo-phalangeal joints (save that of the thumb) are biaxial when extended but become uniaxial when flexed.

Then there is another peculiarity of finger movement that often escapes notice. Let the fingers be fully extended: as of course is known, they are of very unequal length. Now let them be flexed: with progress of flexion through but a few degrees the fingertips can readily be brought to exactly the same plane, as in touching a table top. Something occurs

even in this slight movement to produce the illusion of equal finger length. What occurs is not far to seek; the longer middle and ring fingers are simply a bit more flexed at all of their joints. Now let the fingers be completely flexed: if a plane surface, e.g., a glass plate, be held between the palm and the tips of the flexed fingers, it is readily apparent that all finger-tips are in contact with the glass plate, i.e., are all in the same plane. Looking at the back of the hand it is seen that the difference in length of the even-tipped fingers is taken up to produce a series of dorsal arches at the metacarpo-phalangeal and interphalangeal joints.

Finally as to the hand, it should be noted that at the carpo-metacarpal joint of the thumb and at the metacarpo-phalangeal joints of the other fingers a combination of flexion-extension and abduction-adduction can result in circumduction of individual fingers, where the apex of the circumduction cone is the carpo-metacarpal joint of the thumb or the metacarpo-phalangeal joint of each of the other fingers, and where the base of the cone is a circle inscribed by each of the finger tips. In circumduction of the fingers, as in that of the wrist, no third axis is involved; i.e., the fingers never in any degree turn on their own linear axis.

To complete the definitions of movements in the upper extremity, there remains one other cone production of great importance, viz., supination-pronation of the forearm. *Supination,* or turning of the hand from palm down to palm up, is carried out by uncrossing of the radius from the ulna, this latter bone taking no active part in the movement. The radius, the triangular disc of fibrocartilage and the whole hand, these three acting as a single unit, generate a half cone about the following axis: a line from the apex of the cone at the center of the head of the radius to the styloid process of the ulna, this latter process being the center of the circle forming the base of the cone. *Pronation* is the reverse action of turning the hand from palm up to palm down, the radius and its attached parts generating the same half cone in the opposite direction, the radius coming to lie diagonally across the ulna.

It is apparent that supination-pronation involves the simultaneous use of two joint parts, the proximal and distal radio-ulnar articulations, which are separated from each other by the length of the forearm. If we were to take the narrow view and attempt to classify each of these joints separately, then the problem would become intricate and, in fact, absurd. The broader and simpler view is to speak of the whole radio-ulnar joint as having proximal and distal articular parts and a long non-articular part, the extent of this last giving attachment to the chorda obliqua and the membrana interossea. On this basis we can define the axis of the supination-pronation cone (vide supra); also we can classify the whole radio-ulnar joint as *rotary.* This latter view is further justified by the fact that the proximal and distal parts of the joint never act independently: if the head of the radius is rotated, then the entire radius must change its relation to the ulna. In other words, the radius does not under any normal circumstance rotate on its own linear axis, but must with the hand generate the cone of supination-pronation, the axis of which cone is defined solely in terms of forearm topography. Therefore, the definitions of the axis and of supination-pronation hold, no matter in what position the arm may be placed.

Some authors use the terms supination and pronation in reference to the foot. But such terms imply a similarity in mechanics of the forearm and leg for which there is no justification in fact. The bones of the leg, i.e., the tibia and

fibula, do not under normal circumstances change their relations to each other; they are always parallel. Therefore there is not the remotest possibility of the tibia and foot generating a cone of supination in relation to the fibula.

However, within the foot itself, especially at the transverse tarsal articulation (Chopart's joint), there is very free movement, certain expressions of which are a turning of the sole inward, i.e., a presentation toward the tibial side, properly called *inversion,* improperly called supination, and a reciprocal movement, properly called *eversion,* improperly called pronation, which is a turning of the sole outward, i.e., a presentation toward the fibular side.

The transverse tarsal joint, the most movable part of the tarsus, is as a rule treated very casually in the matter of classification. Besides the inversion-eversion noted above, this joint permits flexion-extension, abduction-adduction and any combination of these movements. In other words it moves about any axis, and even though the amplitude of movement about some of these axes is not great, the joint as a whole is certainly *multiaxial,* instead of gliding, which latter is the classification usually given any and all tarsal joints. As has already been mentioned, the talo-navicular part of the transverse tarsal joint is an excellent example of the ball and socket configuration.

The metatarsal-phalangeal joints of the foot and the comparison of the three segments of the great toe with those of the other digits are much the same as those recounted for the hand. One difference to be noted is that the functional midline of the foot, being the line of reference for abduction-adduction, falls not along the middle digits, as in the hand, but along the second digit. In other words the great toe and the lateral three toes are abducted away from, and adducted toward, the second toe. This difference between hand and foot rests on the well known difference in distribution of the interosseous muscles.

Another difference, largely adaptive, is found in the tarso-metatarsal joint of the great toe as compared to the same joint of the thumb. Instead of the very free biaxial (saddle) joint of the thumb, the joint between the so-called metatarsal bone of the great toe and the first cuneiform is normally a much restricted biaxial joint, which does not permit opposability of the great toe to the other digits, nor does it afford enough amplitude of movement to make the great toe an efficient implement for prehension.

This difference is spoken of as largely adaptive, because cases occur where loss of upper extremities or loss of their dexterity is to a considerable degree compensated by the lower extremities, especially through adaptation of the feet, which latter may acquire astonishing versatility in executing such complicated acts as writing, typing, needlework and other finely coordinated movements usually ascribed only to manual dexterity.

The one case of this kind known to the author was a teen-age girl, hospitalized because of chorea, which affected most severely the upper extremities. Choreic movements of these parts were so bizarre and maladroit that the arms had to be strapped to the trunk. The lower extremities, however, were wholly unaffected, and the patient had learned to use her feet in very much the way a normal person uses the hands. In fact, the embroidery, which she did entirely with her feet, was said by apparently competent judges to be far superior to anything they had seen produced by hand. Also her penmanship, or footwriting, was a deft, smooth Spencerian not often found in handwriting. One of the most conspicuous attributes of these versatile

feet was the wide amplitude of movement developed at the tarso-metatarsal joint of the great toe, not only of the right extremity but also and almost as well of the left. From such a case one must conclude that the human foot, usually an implement of weight-bearing and locomotion, still retains a large degree of adaptability in the direction of prehension and finely coordinated digital movements. One should in this connection recall the functionally hand-like feet of many other primates.

Finally attention must be called to the striking differences between wrist and ankle joints and to the divergent uses of the terms flexion and extension at these joints. Where the wrist, as already noted, is a biaxial joint, the ankle is a strictly limited mortise configuration, allowing only a uniaxial classification. Thus where the wrist is capable of flexion-extension, abduction-adduction and a combination of these to produce circumduction, the ankle is confined to the one-axis movements of flexion and extension. The illusion of side-to-side movement at the ankle must be attributed to the various tarsal articulations, mainly to the transverse tarsal joint, whose talo-calcaneo-navicular part is freely movable in all axes.

As to definitions of flexion and extension at the ankle, certain difficulties arise. If we use the simple, obvious definition of flexion as a movement reducing the angle between foot and leg, then the forward, upward bending of the foot is flexion, and the backward, downward return of the foot to, toward or beyond a straight line is extension. In fact, these are the usually accepted definitions. Yet it so happens that ankle flexion as thus defined is entirely a function of the extensor muscles of the leg; likewise ankle extension is entirely a function of the flexor muscles. This incongruity is sometimes and halfway met by saying that forward, upward bending is dorsal flexion and that downward, backward straightening is plantar flexion. The fact remains, however, that so-called dorsal flexion is still a function of the extensor muscles.

This difficulty can best be resolved by homologizing the movements of the hand and foot. Thus there is no question that flexion at the wrist is a palmar movement of the hand toward the volar (flexor) aspect of the forearm, and extension at the wrist is a dorsal movement of the hand toward the extensor aspect of the forearm. Also it is seen that flexion and extension, as thus defined, are respective functions of flexor and extensor muscles. It is further apparent and beyond question that the palm of the hand and the sole of the foot are homologous; so respectively are the dorsum of the hand and the dorsum of the foot, the flexor aspect of the forearm and the flexor aspect (calf) of the leg, the extensor aspect (dorsum) of the forearm and the extensor aspect of the leg. Therefore it follows that the movement of drawing the sole of the foot toward the calf of the leg is *flexion*, and is a function of flexor muscles; on the same basis the opposite movement of drawing the dorsum of the foot toward the extensor aspect of the leg is *extension*, and is a function of extensor muscles. It is wholly coincidental to the case of the human ankle joint that flexion tends to produce a straight line between foot and leg, whereas extension tends to produce an angulation.

Thus it is seen that the simple definition of flexion as a movement reducing the angle between components does not hold for all cases; e.g., a limitation to the parasagittal plane had to be made for flexion at the shoulder and hip joints, and as just noted above the usual definitions of flexion and extension had to be completely reversed at the ankle. It is

desirable then to formulate a definition that is consistent for any and all cases. This formula is found in the general proposition that flexion is a movement tending to reduce the trunk and appendages as a unit to a body of minimum surface, i.e., to a sphere. In this rolling-up process flexion does, by more than coincidence, restore the body to the fetal posture. According to this definition flexion will be seen to hold as well for the foot as for the hand, for the hip as for the shoulder, for the head and trunk as for the extremities and their parts. It is one of a group of movements that may be termed *contractile;* adduction and medial rotation are other movements of this group. The *expansile* movements, reciprocals of the above, are extension, abduction and lateral rotation. This arrangement of opposing groups of movements is of universal application among animals, and is thoroughly implemented by opposing groups of muscles.

SUMMARY

A functional classification of freely movable joints is proposed as follows: (1) *non-axial,* e.g., most intercarpal and intertarsal joints; (2) *uniaxial,* the axis being either transverse or longitudinal; (a) *hinge,* e.g., elbow, knee, interphalangeal joints; (b) *rotary,* e.g., atlanto-epistropheal, radio-ulnar; (c) *gliding hinge,* e.g., temporo-mandibular, crico-thyroid; (d) *gliding rotary,* e.g., crico-arytenoid; (3) *biaxial,* the two axes at right angles, e.g., wrist, atlanto-occipital; (4) *multiaxial,* employing all axes, e.g., hip and shoulder joints, talo-navicular. Joint movements are defined in simple geometric terms, the shoulder and hip joints requiring special attention. The biaxial metacarpo- and metatarso-phalangeal joints of other digits correspond to carpo-metacarpal and tarso-metatarsal joints of pollux and hallux, respectively. Joints and epiphyseal centers confirm the view that all segments of the pollux and hallux are phalanges, with metacarpal and metatarsal elements suppressed or reduced to carpal or tarsal parts. Great adaptability of the foot is exemplified in a cited case of chorea, where upper extremities were so affected as to require strapping to the trunk, whereas the unaffected feet carried out manual functions with extreme skill. Definitions of flexion-extension at the ankle are formulated in accord with comparisons of hands and feet. Universally applicable definitions group flexion, adduction and medial rotation as *contractile* movements tending to restore the body and its parts to the fetal posture; reciprocal movements of extension, abduction and lateral rotation are *expansile.*

BIBLIOGRAPHY

A review of the very large literature on movable joints and joint movements has not been undertaken here because in the first place it would extend the present paper beyond reasonable bounds, in the second place it has already been done with critical thoroughness in the following monographs:

Fick, R. Handbuch der Anatomie und Mechanik der Gelenke. G. Fischer, Jena. 1904, 1910.

Steindler, A. Mechanics of Normal and Pathological Locomotion in Man. Charles C. Thomas, Springfield, 1935.

SUMARIO

Una clasificación functional de articulaciones libremente movibles es propuesta como sigue: (1) *non-axil,* ejemplo, la mayoria de las articulaciones intercarpales e intertarsales; (2) *uniaxil,* el eje puede ser transversal o longitudinal: (a) *bisagra,* ej., codo, rodilla, articulaciones interfalangeales; (b) *rotatoria,* ej., atlanto-epistrofial, radio-cubital; (c) bisagro-deslilizante, ej., temporo-mandibular, crico-tiroidea; (d) rotatoria-deslizante, ej., crico-aritenoidea; (3) *biaxil,* los dos ejes a angulo recto, ej., muñeca, atlanto-occipital; (4) *multiaxil,* empleando todos los ejes, ej., hombro y cadera, talo-navicular. Los movimientos articulares son definidos en terminos geometricos simples, el hombro y la cadera requiriendo atención especial. La biaxil metacarpo- y metatarso-

falangeal y otras digitales corresponden a las articulaciones carpo-metacarpal y tarso-metatarsal de Pollux y Hallux respectivamente. Las articulaciones y todos los centros epificiales confirman la idea de que todos los segmentos de pollux y hallux son falanges, con metacarpal y metatarsal elementos suprimidos o reducidos a partes tarsales o carpales. Adaptabilidad en alto grado del pie es citada en los casos de corea, donde las extremidades superiores estaban afectadas de tal manera que necesitaban ser atadas al tronco, dando lugar a que los pies inafectados realizaban funciones manuales con gran destreza. Definitivos movimientos de flexion-extensión en el tobillo son formulados de acuerdo con comparación a las manos y pies. Definiciones universalmente aplicables se agrupan flexion, adducción y rotación media como *contractiles,* movimientos con tendencia a restaurar el cuerpo y sus partes a la postura fetal; movimientos de extensión recíprocos, abducción y rotacion lateral son *expansiles.*

RÉSUMÉ

Une classification fonctionelle des articulations largement mobiles est suggérée: (1) *non-axiale,* e.g., la plupart des articulations intercarpales et des articulations intertarsales; (2) *uniaxiale,* l'axe étant ou transverse ou longitudinal: (a) mouvement analogue à celui, d'une *charnière;* e.g., le coude, le genou, les articulations interphalangiennes; (b) *rotatif,* e.g., l'articulation radio-cubitale, l'articulation atlanto-épistrophéale; (c) *glissante charnière,* e.g., temporo-maxillaire, crico-thyroïde; (d) *glissante rotatoire,* e.g., crico-aryténoïde; (3) *bi-axiale,* les deux axes à angle droit, e.g., le poignet, l'articulation atlanto-occipitale; (4) *multi-axiale,* employant tous les axes, e.g., l'épaule, la hanche. Les mouvements de jointures sont décrits en termes géométriques simples, l'articulation de la hanche et celle de l'épaule demande une étude spéciale. Les articulations métacarpales et métatarso-phalangiennes des autres doigts correspondent respectivement aux articulations métatarsales du pouce et du gros orteil. Les jointures et les centres épiphysiens confirment l'opinion que tous les segments du pouce et du gros orteil sont des phalanges, avec des éléments métacarpiens et métatarsiens supprimés ou réduits aux parties carpiennes ou tarsiennes. La grande adaptabilité du pied est exemplifiée dans un cas de chorée cité par l'auteur. Les extrémités supérieures nécessitèrent l'immobilisation au trone tandis que les pieds n'étaient nullement affectés, les functions de la main étant assumées par le pied avec grande dextérité. Les mouvements de flexion et d'extension de la cheville sont formulés en complet accord comparatif avec ceux de la main et du pied. Des définitions de flexion, d'adduction et de rotation médiane sont données et envisagées comme mouvements *contractiles* ayant pour but la restoration du corps et de ses annexes à la posture fétale; les mouvements réciproques d'extension, d'abduction et de rotation latérale sont décrits comme mouvements *expansifs.*

U. S. War Bonds are good insurance for the future

of unimpaired scientific endeavor.

Un Tercer Caso De Esofagoplastia Total*

(Esophagoplasty: Report of the Author's Third Case)

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MEXICO, D. F.

SUMMARY

The case of a young girl who suffered from an impassable stricture of the esophagus caused by swallowing lye is presented. Cure resulted from performing a prethoracic-esophago-dermo-jejunoplasty. This is the third case successfully operated upon by the author.

EL TRATAMIENTO de las éstenosis infranqueables del esófago, es uno de los problemas más difíciles de resolver, probándolo el gran número de operaciones que se han aconsejado para curar estos enfermos que están condenados a llevar una vida miserable, alimentándose por una fístula gástrica, y sufriendo las molestias inherentes a la imposibilidad de deglutir la saliva. La moral en estos pobres enfermos se abate y les hace aceptar cualquiera intervención por grave que sea.

El número de procedimientos quirúrgicos es grande, después de hacer un examen cuidadoso de todos, me pareció el de Wullstein-Roux-Lexer, uno de los mejores y es el que hasta la fecha he aplicado con todo éxito en mis tres operados, como en el caso de la enferma Señorita A. A. de Minatitlán, Ver. de 22 años de edad, quien sufrió accidentalmente una quemadura del esófago con sosa cáustica, y a pesar de todos los tratamientos su estenosis fué progesando de tal manera que se hizo infranqueable, pues con gran dificultad tan

Fig. 1. Sección del yeyuno a 0.40 ctms. del ángulo yeyuno duodenal.

sólo líquidos podía pasar; en ese estado se presentó a mi consulta el 4 de julio de 1938, habiéndole propuesto la esófagoplastía, la cual fué aceptada por ella y el 29 de julio del mismo año le practiqué el primer tiempo de dicha operación y que consistió en lo siguiente:

Anestesia: Raquia, 0.20 c.g. de Novocaina. Laporotomía media supraumbilical. Sección del yeyuno a 0.40 ctms. del ángulo yeyuno-duodenal (Fig. 1). Anastomosis del cabo distal al yeyuno a 0.40 ctms. por debajo de la primera sección, es decir a 0.80 ctms. del ángulo yeyuno-duodenal. La porción comprendida entre esta anastomosis y la sección realizada a

* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

0.40 ctms. del ángulo yeyuno-duodenal se liberó seccionando tres arcos vasculares para poder desprenderlos de su meso y se hizo ascender pasando a través del mesocolon transverso y ligamento gastrocólico (Fig. 2), anastromosando el intestino al estómago haciéndolo pasar después por debajo de la piel del tórax a 8 ctms. a la izquierda de la línea media, hasta la altura del tercer espacio intercostal, suturándolo a la piel en un ojal hecho previamente a este nivel (Fig. 3). Se cerró la pared abdominal. El primer tiempo de la operación se terminó.

El 28 de octubre de 1938 le practiqué la gastrostomía por el método de Seen. El 5 de diciembre del mismo año le practiqué la sección del esófago (Fig. 3), entre dos pinzas, con el objeto de hacer completamente aséptica dicha intervención fijando los cabos a las partes periféricas y dejándolas a permanencia hasta que por sí solas se despredieron, logrando de esa manera que éste tiempo operatorio relativamente fácil, pero peligroso por la infección del tejido celular, se hiciera perfectamente bien sin ningún accidente.

El 26 de abril de 1939 le practiqué otra intervención que consistió en unir por un cilindro de piel el orificio esofágico con el orificio yeyunal (Fig. 4), los límites superior e inferior del cuadrilátero de piel que formarían el tubo, pasaban a unos dos centímetros arriba y abajo de dichos orificios, teniendo una anchura de 0.08 centímetros. Se hizo lateralmente un despegamiento parcial, únicamente lo

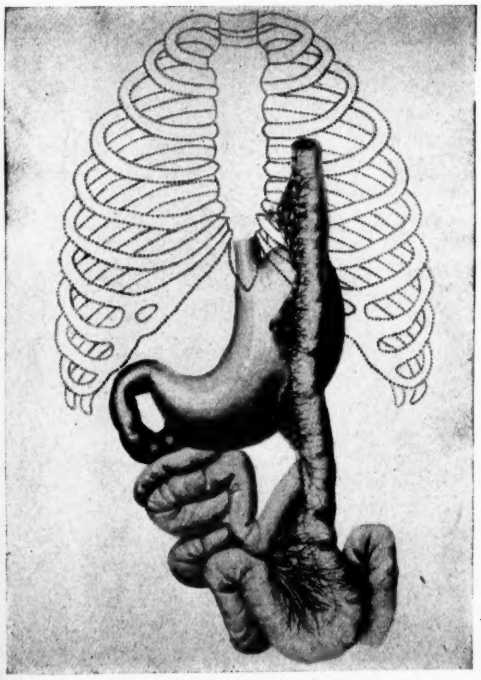

Fig. 2. Anastomosis del cabo distal al yeyuno a 0.40 ctms. por debajo de la primera sección.

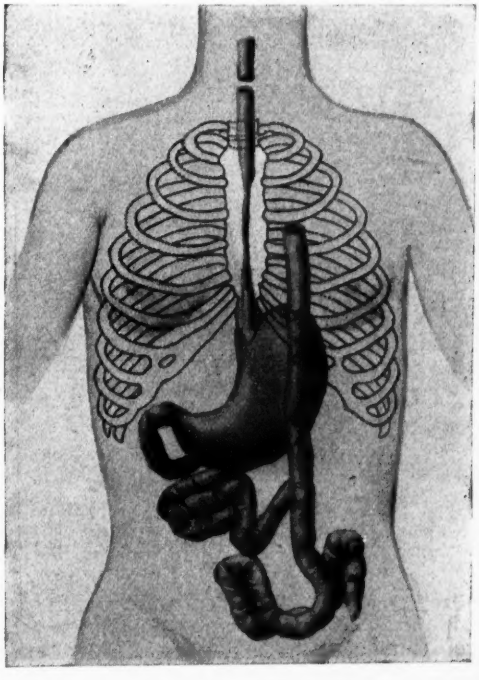

Fig. 3. Anastomosis del yeyuno al estómago, y sección del esófago.

suficiente para poder formar el cilindro y hacer la sutura de los bordes con comodidad. Se despegó la piel hacia los lados y se suturaron sus bordes sobre el cilindro, el cual quedó cubierto (Fig. 5).

La cicatrización era completa el 5 de septiembre de 1939, y el 9 de octubre del mismo año la enferma volvía a alimentarse por la boca; la hice tomar un vaso de agua, habiendo exclamado ella con gran emoción "¡Qué linda es el agua!"

El 18 de diciembre de 1939, le quité la sonda de la gastrostomía y ahora dos años y cinco meses después de estar funcionando perfectamente el nuevo esófago, tengo el honor de presentaros a la enferma (Fig. 6).

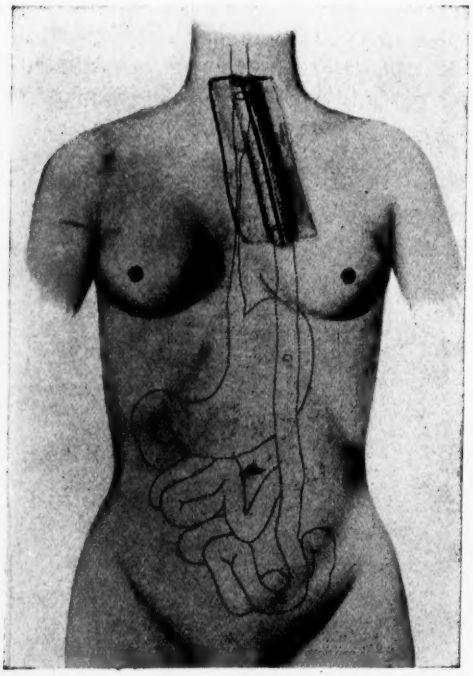

Fig. 4. Sutura de los bordes del cuadrilátero de piel para formar el cilindro que unirá los orificios esófagico y yeyunal.

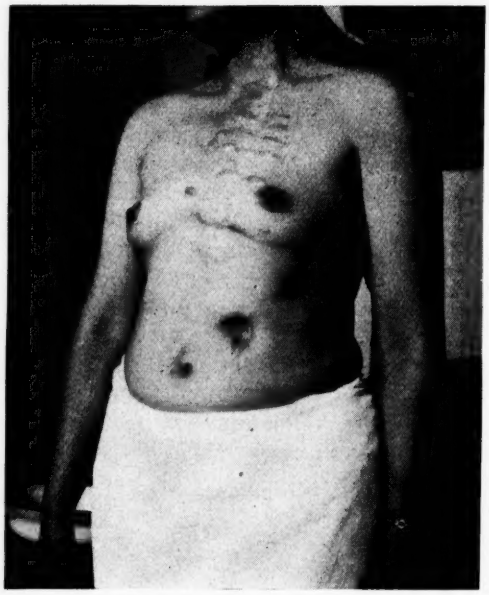

Fig. 5. Despegamiento lateral y sutura de la piel sobre el cilindro, el cual queda cubierto.

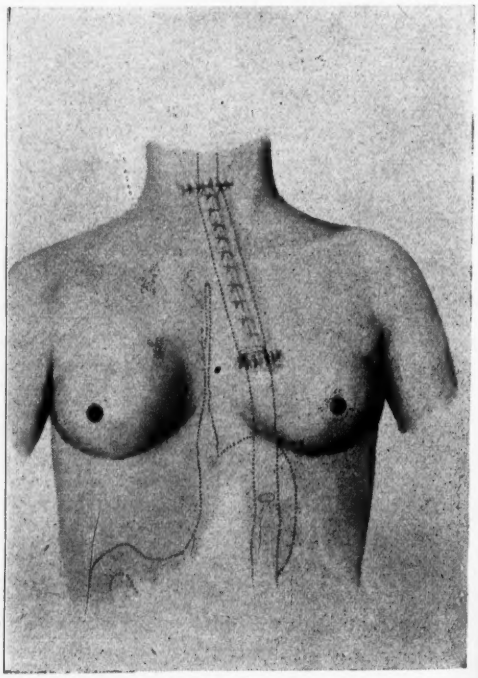

Fig. 6. Estado de la enferma después de haber cicatrizado completamente.

SUMARIO

El autor presenta el caso de uno joven, que sufrió una estenosis infranqueable del esófago, ocasionada al tomar accidentalmente sosa cáustica en vez de agua. El problema fué resuelto haciendo una pretóraco-esófago-dermo-yeyunoplastía. Este es el tercer caso operado con éxito completo.

RÉSUMÉ

L'auteur présent le cas d'une jeune fille, qui a eu une rétrécissement infranchissable du esophage, pour avoir pris sans savoir de la soude caustique á la place de l'eau. La solution du probléme a été en faisant une esophagoplastie totale. C'est le troisiéme succés complet obtenu.

NEWS ITEMS

The Howard Taylor Ricketts Prize of $200 of the Division of the Biological Sciences of the University of Chicago has been awarded to **Dr. José Oliver-Gonzalez,** a Puerto Rican by birth, research associate at the university, in recognition of his work indicating that trichinosis is caused by two forms of parasite and therefore immunity to the disease can be produced only by the formation of two antibodies. The prize was established in 1913, in honor of Dr. Howard Taylor Ricketts, of the University of Chicago, who discovered the cause of Rocky Mountain spotted fever. He died in 1910.

At the annual Buckstone Browne luncheon of the Royal College of Surgeons, London, honorary fellowship was conferred on **Professor Antoni Jurasz,** dean of the Polish Faculty of Medicine of the University of Edinburgh.

The Rockefeller Foundation has made a grant of £1,000 to the University of Oxford toward the cost during 1942 of research on the growth of and regeneration of nerves to be undertaken by **Dr. J. Z. Young** in the department of zoology and comparative anatomy.

Dr. Roy Young has been elected president of the Royal Faculty of Physicians and Surgeons at Glasgow.

The Journal of the American Medical Association states that as a result of the decision of the fourth Brazilian Congress of Ophthalmology, held in Rio de Janeiro, the **Brazilian Council of Ophthalmology** has been founded. The chief functions of the council are: (1) to promote the development and progress of the specialty in Brazil and to establish standards of fitness to practice ophthalmology, (2) to act as preceptors for prospective students of ophthalmology and (3) to arrange and conduct examinations to test the qualifications of those who practice ophthalmology and desire a certificate to prove that they meet the standards established by the council. The council will be formed by the professors of ophthalmology from the medical schools of Rio de Janeiro, São Paulo, Bahia, Porto Alegre, Recife and Bello Horizonte and the presidents of the Brazilian Association of Ophthalmology and of four other state ophthalmologic associations. There will be a central executive board and a regional board in each one of the twenty states of Brazil.

Dr. Charles H. Arnold, Executive Secretary of the United States Chapter, has entered the service of the U. S. Army with the rank of Major. The felicitations and good wishes of our officers and members are herewith expressed.

Dr. George S. Foster, Chairman of the New England States Committee of the International College of Surgeons entered active duty in the U. S. Navy on October 1.

(Continued on page 400)

Lissauer's Tract Section*

A Contribution to Chordotomy for the Relief of Pain
(Preliminary Report)

OLAN R. HYNDMAN, M.D.†
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LISSAUER[1] in 1885 made the observation that as the posterior roots enter the cord a group of fine medullated fibers separate themselves from the remaining fibers of the root and, entering the apex of the posterior gray column, course upward in the tract that bears his name.

Lissauer's tract has been carefully studied in man and in laboratory animals (See Figs. 1 and 2). It has been found to contain more non-medullated than medullated fibers[2]. While the medullated fibers are likely endogenous, the non-medullated ones were shown by Ranson[2] to arise from the small cells of the spinal ganglia which are typical unipolar cells with T-shaped processes. These fibers in Lissauer's tract appear to establish synapses with cells in the

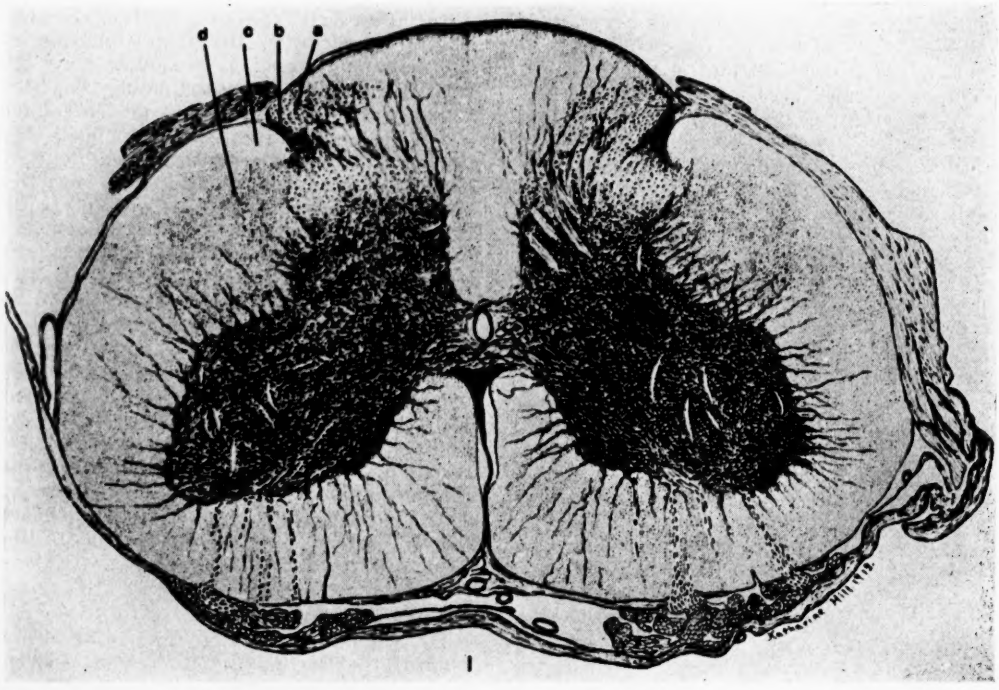


Fig. 1. Section taken from the seventh cervical segment of the cat. A camera lucida drawing of a pyridine-silver preparation. a, obliquely cut medullated fibers of entering dorsal root. b, tract of Lissauer. c, dorsal spinocerebellar tract. d, pyramidal tract. (Taken from Ranson[2].)

* Read before the meeting of the U. S. Chapter of the International College of Surgeons, Denver, Colorado, July 15-18, 1942.
† From the department of surgery, neurosurgical service, College of Medicine, State University of Iowa.

substantia gelatinosa Rolandi[3].

Although Sano[4] in 1909 suggested that this tract of non-medullated fibers and its nucleus may be a center for vasomotor and pilomotor control, Ranson[3] in 1914 expressed the belief that it was an apparatus for the conduction of pain and temperature sensibility.

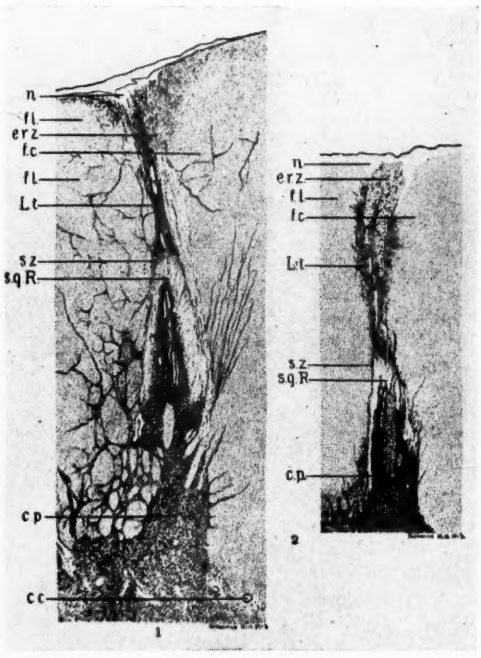


Fig. 2. (1). Section from the third cervical segment of the spinal cord of man; pyridine-silver technique. (x 32).

(2). Section from the third thoracic segment of the spinal cord of man; pyridine-silver technique. (x 32).

C.c., Canalis centralis; c.p., Columna posterior; e.r.z., entering root zone; f.c., fasciculus cuneatus; f.l., funiculus lateralis; L.t., Lissauer's tract; n., neuroglia; S.g.R., Substantia gelatinosa Rolandi; s.z., stratum zonale. (Taken from Ranson[3].)

Note: Judging from these figures, it may be better to carry the section into the posterior column a little deeper than 2 mm.

In any case it has become generally believed and taught that pain fibers course upward a short distance in Lissauer's tract before their secondary neurones swing across the cord to take their place in the spinothalamic tract. Such reference to the tract is sufficient for this preliminary report and for further details the reader is referred to Ranson's work[2, 3] and the bibliography he gives.

In performing anterior chordotomy or section of the spinothalamic tract, I have been interested in the fact that the skin level of analgesia and thermanesthesia was always about 4 or 5 segments lower than that which would correspond to the level of the cord section. In some patients, after 6 months or a year the discrepancy in the levels has widened to include 6 or 7 segments or dermatomes. In the performance of over 100 anterior chordotomies, never has the level of analgesia reached the dermatome corresponding to the section in the cord. These results have obtained whether the chordotomy was unilateral or bilateral, and in cases in which the section was certainly extensive enough to completely include the spinothalamic tract. This is one of the reasons why I adopted the policy of routinely making the section between the eighth cervical and first thoracic roots. After such a section the level of analgesia will ordinarily be at the line of the nipples or the 5th thoracic dermatome, and occasionally at the 6th or 7th dermatome.

This discrepancy is not due to overlap in the skin as evidenced by the fact that in a complete transverse lesion of the cord the level of skin anesthesia does correspond to the level at which the cord is severed. Hence the idea presented itself that pain and temperature fibers may course upward in Lissauer's tract a distance of 4 or 5 segments before crossing over and in this way account exactly for that zone which fails to be made analgesic and thermanesthetic after anterior chordotomy.

The following cases illustrate the results of cutting the tract.

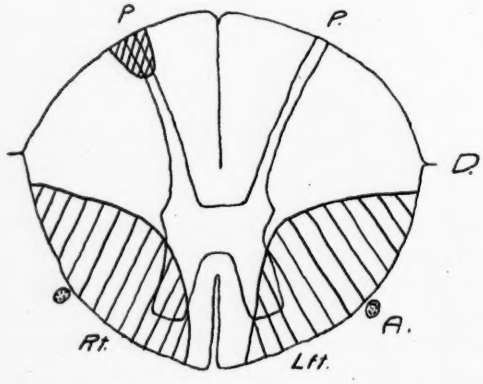
Case 1. A. C. (41-10697), a white man, 63 years

of age. He was readmitted on Mar. 4, 1942 for a consideration of anterior chordotomy to relieve severe pain in the right pelvis and right lower extremity. The pain was due to an inoperable carcinoma of the bladder.

Operation: On Mar. 9, 1942 the laminal arches of C_6 and 7 and D_1 were removed. An anterior chordotomy was carried out on the left between the eighth cervical and first thoracic roots.* At the same level, Lissauer's tract was cut on the right. To accomplish this, the tiny artery that courses along the line of entry of posterior roots was cauterized by a brief application of the electrocautery. The point of a cataract knife was inserted about 2.0 mm. into the cord on the mesial side of the posterior root line and brought out just on its lateral side. The incision was rectangular being about 2 mm. deep and about 2 mm. wide.

Result: The patient made an uneventful recovery and was free of his former pain. Analgesia and thermanesthesia on the right was complete and extended upward to include the first thoracic dermatome, front and back and in the axilla. By the usual clinical tests no impairment in sensibility to light touch, two point discrimination or pallesthesia could be detected on either side. The patient denied subjective numbness in the zone of analgesia. Co-ordination and motor strength were not impaired. The Babinski sign was present on the right. The right testicle was painless to squeezing while the left was normally sensitive.

A follow-up examination on May 13, 1942, over 2 months following operation, revealed no change in the level of analgesia. The level corresponded to the level of cord section and is the highest level I have obtained following chordotomy at D_1 by a matter of 4 or 5 segments.



* I feel this to be the cord segment of choice for anterior chordotomy (the first dorsal segment). A cataract knife is inserted into the cord about 1.5 mm. anterior to the dentate ligament and brought out about 2.5 mm. mesial to the anterior root line, almost to the anterior median fissure. The incision is made deep enough to penetrate the gray matter, about 3.5 to 4 mm.

CASE 2. F. N. (42-4159), a white woman, 31 years of age, was admitted on April 7, 1942 because of intractable pain in the pelvis and abdomen due to inoperable and advanced carcinoma of the cervix.

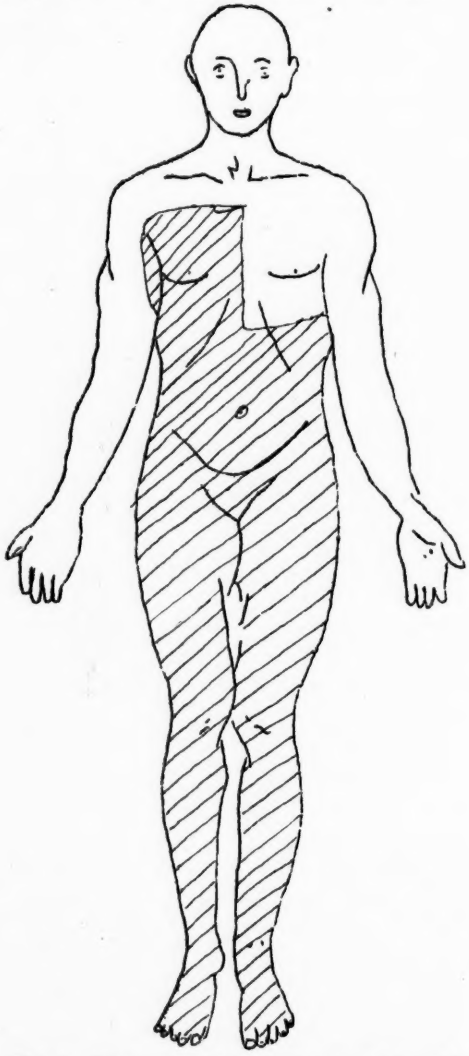


Fig. 3. Diagram illustrating the sensory losses in F.N. (case 2). In the single hatched zone the sensibilities were as follows: Touch, normal except for about a 25 per cent reduction in the upper 5 dermatomes on the right; temperature discrimination, 0; pain, 0.

The insert on the left is a diagrammatic representation of the sections made in the cord at D_1. The cross-hatched area represents the extent of section. D, dentate ligament; A, anterior root line; P, posterior root line. At P on the right is shown the section through Lissauer's tract.

Operation: On April 8, 1942 the laminal arches of C_6 and 7 and D_1 were removed. Anterior chordotomy was carried out at the first dorsal segment on both sides. The incision was made as described in case 1, and it was made exactly the same on both sides. Lissauer's tract was cut only on the right side and at the same level as the anterior chordotomy.

Result: (See figure 3.) On the right the level of analgesia and thermanesthesia extended up to include the first dorsal dermatome, while on the left the level extended up to D_7. No other sensibilities were materially impaired except that light touch was about 75 per cent of normal in the upper 5 dorsal dermatomes on the right, and the patient sensed a mild subjective numbness there when she rubbed the area with her own hand.

The right lower extremity was areflexic and in a state of flaccid paralysis during the 15 days while she was in the hospital. Impairment of motor strength, and even a flaccid paralysis for some time, is not uncommon following bilateral anterior chordotomy in patients who are debilitated from carcinoma. I do not feel the section of Lissauer's tract was responsible for this paralysis.

CASE 3. L. T. (40-13796), a white woman, 60 years of age, was readmitted on Mar. 22, 1942. She complained of post-herpetic neuralgia in the distribution of D_8, 7 and 8 on the left. The usual scars which remain after herpes zoster were present in the distribution. During the past 2 years paravertebral injections of novocain and alcohol were made on 4 occasions with relief for a few months at a time.

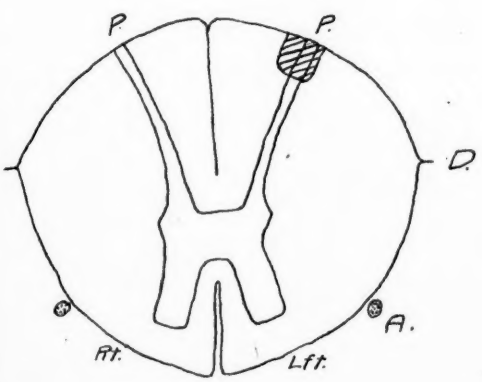
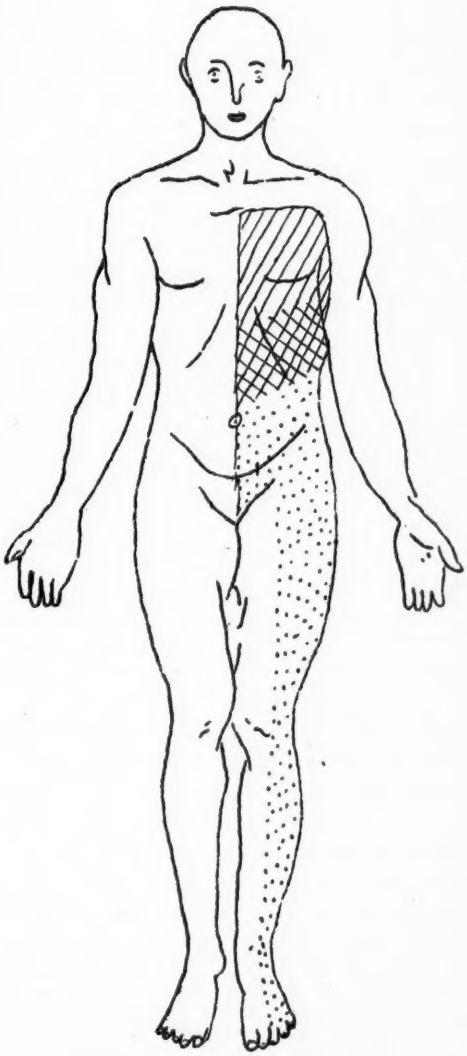


Fig. 4. Diagram illustrating the sensory losses in L.T. (case 3). The single hatched zone represents the loss following the first operation: Touch 60 per cent; temperature discrimination, 25-50 per cent; pain, 0.



The double hatched zone represents the additional loss following the second operation: Touch, 0; temperature discrimination, 50 per cent; pain, 0.

In the stippled zone touch was about 75-80 per cent of normal. Pain and temperature sensibility were slightly impaired. These losses appeared to involve only the lateral half of the extremity.

The findings on the back corresponded with those on the anterior surface of the body.

The insert on the left is a diagrammatic representation of the extent of section through Lissauer's tract on the left at P, (posterior root line). This section was made just below the entrance of the first dorsal root and below the entrance of the fifth dorsal root.

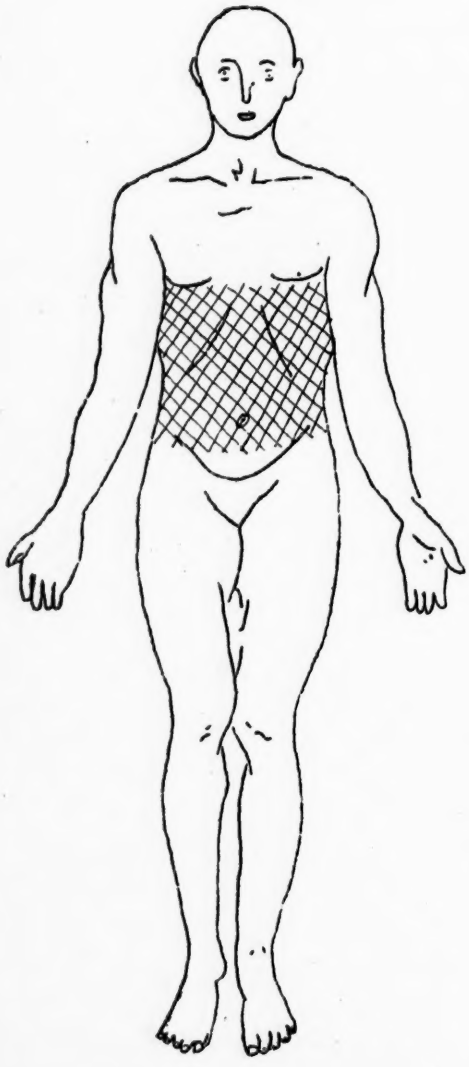


Fig. 5. Diagram illustrating sensory losses in patient 4. In the double hatched zone sensibilities were as follows: Pain, 0; temperature discrimination, 50 per cent; light touch, 75 per cent.

These sensibilities shaded into normal over the distance of one segment above and a little over one segment below the double hatched zone. Sensibility to pain therefore was completely abolished from D_8 to D_{11} inclusive, front and back.

The insert on the right is a diagrammatic representation of the sections through Lissauer's tracts at P on both sides. These sections were made just above the entrance of the sixth dorsal roots and above the entrance of the eighth dorsal roots.

She returned on this occasion complaining that the pain was as severe as ever. There was a deep aching pain constantly present and a hyperesthesia to light touch and pressure extending from the spine around the left side to the midsagittal plane of the abdomen and in the distribution of D_6, 7 and 8. There was at this time very little loss of sensibility to light touch, pin prick and temperature discrimination in the involved zone.

First Operation: On Mar. 27, 1942 the laminal arches of D_1 and 2 were removed. The posterior root of D_1 was cut on the left and Lissauer's tract was sectioned on the left just below the entrance into the cord of the first dorsal root.

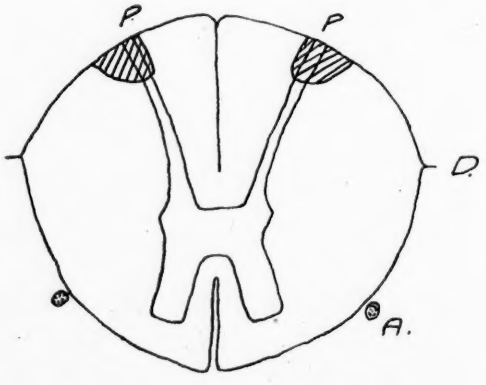
Result: The sensory losses are shown in figure 4. These were practically the only neurological changes demonstrable. There were no motor, reflex or sensory changes in the lower extremities except for a very mild ataxia of the left lower extremity. The analgesia did not extend low enough to abolish the pain.

Second Operation: On Apr. 11, 1942 the laminal arches of D_4 and 5 were removed. The posterior root of D_5 was cut on the left. Lissauer's tract was sectioned on the left just below the entrance of the fifth dorsal root into the cord.

Result: The sensory losses are shown in figure 4. The left lower extremity was somewhat ataxic in performing the heel-knee test. Flexion and extension of the ankle and toes were slightly impaired on the left and the Achilles tendon reflex was a little more brisk than before the second operation. Bowel and bladder function was not impaired. The pain of which she had complained was completely abolished.

CASE 4. I. J. (38-19199), a white woman, 43 years of age, was admitted on May 5, 1942. She complained of constant and intractable girdle pain in the distribution of D_7, 8 and 9 on both sides. She had sustained a compression fracture of the tenth dorsal vertebra in 1936. The girdle pain began in July 1940. Paravertebral injections of novocain and alcohol failed to give relief.

Operation: On May 12, 1942 the laminal arch of D_5 and the upper half of the arch of D_6 were removed. Lissauer's tract was sectioned on both sides just above the entrance into the cord of the sixth dorsal posterior roots. Then the laminal arch of D_7 was re-



moved and the same procedure carried out just above the entrance of the eighth dorsal roots. No sensory root was cut.

Result: The patient made an uneventful recovery and was free of the girdle pain. The sensory losses are depicted in figure 5.

Pain, light touch, and thermal sensibilities, two point discrimination, sense of position, vibratory and stereognostic sense were unimpaired in the lower extremities. The knee and Achilles tendon reflexes were somewhat more active on both sides than they were previous to operation. A feeble ankle clonus of 2-3 jerks was present on both sides. Plantar stimulation caused normal flexion of the great toes. There was no impairment of bowel and bladder function.

From this patient it can be deduced that a section of Lissauer's tract above the entrance of the eighth dorsal roots will abolish pain and temperature sensibility in about the next four lower dermatomes.

CASE 5. C. W. (41-7139), a white woman, 31 years of age, was admitted on Apr. 26, 1942 because of intractable pain in the pelvis. There was an inoperable carcinoma of the cervix with extension to the rectum.

Operation: On Apr. 29, 1942 the laminal arches of C_3 and 4 and of C_7, D_1 and 2 were removed. Anterior chordotomy was carried out on both sides at D_1 (between the eighth cervical and first thoracic roots). Lissauer's tract was sectioned at this same level on the left only. Then Lissauer's tract was sectioned on the right only between the third and fourth cervical sensory roots.

Result: Analgesia and thermanesthesia were present up to the seventh dorsal segment on both sides and in this zone light touch was not impaired. There was an additional zone on the left, from D_1 to D_7 inclusive, in which pain was 20 per cent of normal, light touch 100 per cent and temperature discrimination zero.

The motor strength of the right lower extremity was unimpaired. That of the left was about 70 per cent of normal and this extremity exhibited a mild ataxia.

The right upper extremity was somewhat ataxic but exhibited no impairment of sensibility of pain, temperature or touch.

There was a transient bladder retention for 4 days followed by relatively normal function.

Lissauer's tract and sympathetic function: Thermoregulatory sweating tests were performed on patients 1, 3, 4 and 5. There was no indication whatever by this test that sympathetic activity was impaired by either the anterior chordotomy or Lissauer's tract section.

DISCUSSION

The results in the few patients on whom a section of Lissauer's tract has been employed indicate the following tentative deductions:

1. After a thorough anterior chordotomy at D_1, the discrepancy between the skin level representing D_1 and the highest level of analgesia and thermanesthesia obtained is accounted for by Lissauer's tract. An anterior chordotomy on one side at D_1 in addition to a section of Lissauer's tract on the other side at the same level will result in skin analgesia and thermanesthesia up to and including the first dorsal segment on the side of the Lissauer's tract section. Thus a method is provided whereby a level of analgesia may be brought up to and including the skin level corresponding to the dorsal segment at which chordotomy is performed.

2. After Lissauer's tract section in the dorsal cord, sensory modalities other than pain are impaired. Temperature discrimination may not be impaired to the same degree as pain. Light touch and deep pressure vary from total loss to 50 or 75 per cent of normal. Some of this loss may be a result of carrying the incision into the posterior column. Otherwise the various losses are contingent upon how far up Lissauer's tract the fibers progress before entering their respective fasciculi. It would certainly appear that many touch fibers course upward two to four segments before entering the posterior columns.

3. In the dorsal cord Lissauer's tract section may be used in combination with anterior chordotomy or alone. When used alone it can be counted on to eliminate pain sensibility in 3 or 4 adjacent lower segments. By making multiple sections 3 to 4 segments apart a broad band of analgesia can be obtained as desired.

4. Complications following Lissauer's tract section are minimal. Bowel and bladder function have not been impaired, and even when the section was carried into the postero-lateral column, the signs of pyramidal tract damage were incredibly few. Hence the method is especially suitable to relieve localized and girdle types of pain about the chest and abdomen thus avoiding anterior chordotomy or an extensive rhizotomy.

5. There appears to be no impairment of sympathetic activity after section of the tract as indicated by appropriate sweating tests.

6. Judging from the results in one patient (case 5), the section unfortunately does not appear to be of great value in the cervical region where it could be used to relieve pain in the upper extremity. The cervical region should, however, be investigated further.

7. At the present time it appears that the optimum section is one about 2 mm. wide and 1.5 to 2 mm. deep, directly into the line of entry of the posterior rootlets. The posterior column should be spared as much as is possible. The removal of only one or one and one-half arches is necessary for exposure.

SUMMARY

Section of Lissauer's tract is a relatively simple and feasible procedure unaccompanied by serious complications or sequelæ. The procedure may be used to augment the desired effects of anterior chordotomy, or it may be used alone to obtain selective bands of analgesia in the dorsal dermatomes.

BIBLIOGRAPHY

1. Lissauer, H.: Beitrag zur pathologischen Anatomie der Tabes dorsalis und zum Faserverlauf in menschlichen Ruckenmark. Neurol. Centralbl., 4:245, 1885
2. Ranson, S. Walter: The Course within the Spinal Cord of the Non-Medullated Fibers of the Dorsal Roots: A Study of Lissauer's Tract in the Cat. J. Comp. Neurol. 23:259-281, Aug., 1913
3. Ibid: The Tract of Lissauer and the Substantia Gelatinosa Rolandi. Amer. J. Anat. 16:97-126, 1914
4. Sano, T.: Vergleichend-Anatomische und physiologische Untersuchungen über die Substantia Gelatinosa des Hinterhorns. Arb. neurol. Inst., Wien, 17:1, 1909

SUMARIO

La sección del conducto de Lissauer es relativamente simple y procedimiento posible que no es acompañado de complicaciones y consecuencias serias. El procedimiento puede ser usado para aumentar el efecto deseado en la cordotomía anterior o éste puede ser usado para obtener una banda selectiva de anestesia en el dermatóma dorsal.

RÉSUMÉ

La section du faisceau Lissauer est relativament assez facile à accomplir et n'est pas accompagnée de complications ou de séquelles sérieux. On emploie ce procédé afin d'augmenter les effets désirés de la chordotomie antérieure et aussi, on l'emploie seule pour obtenir des régions d'analgesie dans les dermatoses dorsales.

NEWS ITEMS

Winners of the **Schering Award** for 1941 have just been announced. The subject was "The History of Endocrine Research." The Schering Award, established by the Schering Corporation and conducted by the Association of Internes and Medical Students, offers two tuition scholarships of a year and a half year, respectively, to be granted for the best papers dealing with a selected subject submitted by undergraduate medical students in the United States or Canada. The subject of this year's paper will be announced by them shortly.

Colonel Norman Kirk, M.C., until recently head of the surgical service of the Walter Reed Hospital, Washington, D. C., has been assigned to command the new Army hospital at Battle Creek, Mich.

Dr. Louis B. Flexner, of the department of anatomy of the Johns Hopkins University School of Medicine, has leave of absence to enable him to serve as aide to the committee on aviation medicine of the National Research Council.

(Continued on page 453)

El Tratamiento Del Cancer De La Laringe En El Instituto De Medicina Experimental*

(Treatment of Cancer of the Larynx in the Institute of Experimental Medicine)

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BUENOS AIRES, ARGENTINA

SUMMARY

In the Institute of Experimental Medicine the routine examination in carcimona of the larynx is: Clinical and laryngoscopic examinations, clinical and biologic tests, and biopsy. Routine treatment is begun 48 hours following biopsy. The patients are grouped as to treatment under surgical, radiotherapy, and palliative, according to their general condition and evolution of the lesion.

Only the surgical treatment is discussed in this paper. Laryngectomy is the treatment of choice if there are no contraindications. Intralaryngeal carcinoma is best treated by laryngectomy because of localization of the lesion inside the cartilaginous shell, as well as carcinoma with limited invasion of the neighboring structures. Adenopathy is a contraindication to the operation. Laryngectomy is performed only when there are no general contraindications, such as age, weakness, diabetes, nephritis, myocarditis, etc.

Roentgenotherapy is resorted to only if contraindications to surgical intervention exist or if the patient refuses operation. When recourse to other measures is impractical, tracheotomy should be performed, augmented by roentgenotherapy.

The author discusses his technic, gives statistics and states that surgical treatment is the method of choice in carcinoma of the larynx.

El cáncer de la laringe es una de las localizaciones más frecuentes observadas en el Instituto de Medicina Experimental. Se ha observado en estos últimos años en una proporción de 5 % de todas las neoplasias observadas en dicho establecimiento entre 1931 y 1937. En los últimos años las cifras absolutas de dichos pacientes hancrecido considerablemente. Las cifras de los enfermos atendidos en los últimos años son las siguientes:

1934.	88 enfermos	1937.	138 enfermos
1935.	128 "	1938.	153 "
1936.	129 "	1939.	230 "

El porcentaje sigue asímismo una marcha ascendente, como lo demuestran las siguientes cifras:

Años	*Por cientos*	*Años*	*Por cientos*
1931	4,42	1934	5,09
1932	4,45	1935	5,65
1933	7,66	1936	5,20

El estudio de los antecedentes y demás circunstancias clínicas, muestra los siguientes datos:

* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Antecedentes hereditarios y personales:

1. Con antecedentes neoplásicos hereditarios, por ciento:

	Años					
	1931	1932	1933	1934	1935	1936
Abuelos	...	1,08	1,28	1,16	...	...
Padres	4,08	6,52	8,97	...	0,79	2,32
Hermanos	1,36	2,17	5,14	1,16	1,58	0,77

2. No presentan antecedentes neoplásicos en sus antepasados:

94,56 90,21 84,60 97,68 97,62 94,91

El tabaquismo es un antecedente que casi no falta en estos enfermos. He aquí cifras de tabaquismo y de otros antecedentes de los pacientes:

Tabáquicos:						
Fumadores	96	98,94	91,34	99,80	99,21	97,56
No fumadores ..	7,74	10,86	4,80	...	0,79	1,54
Alcohólicos						
Grandes alcoholistas ...	38,88	28,04	18,27	27,86	27,18	33,81
Moderados	41,10	38,34	26,92	42,01	22,82	24,82
No alcoholistas..	26,02	33,63	54,80	30,13	50,—	44,37
Nutritivos:						
Mixto	1,00	95,65	93,26	100	100	100
Carnívoro puro	...	...	...	...	...	...
Vegetariano	...	4,34	6,73	...	...	...
Edad:						
Entre 31 a 40...	16,44	7,77	17,38	11,62	10,22	12,41
Entre 41 a 50...	38,32	41,13	13,03	36,09	26,39	27,19
Entre 51 a 60...	27,40	29,97	43,90	34,86	46,06	41,01
Entre 61 a 70...	9,58	12,21	34,76	11,62	13,41	13,96
Entre 71 a 80...	8,26	1,11	8,69	5,81	3,92	5,43
Entre 81 a 90...	...	1,11	...	...	...	...
Sexo						
Hombres	93,63	100	96,15	100	100	100
Mujeres	1,36	...	3,84	...	...	...

"Se deduce, pues, que la edad de preferencia es entre los 40 y 60 siendo el sexo un factor importante, ya que es raro en la mujer, porque se relacionaría con el hábito de fumar, sobre todo si se tiene en cuenta que las pocas mujeres observadas en este Instituto con esta localización, eran fumadoras."

La práctica establecida por la Dirección del Instituto de Medicina Experimental desde que se iniciaron sus funciones, en cuanto al tratamiento de los enfermos afectados de un cáncer de la laringe, no es sistemática sino *ecléstica.*

De acuerdo con esto, el tratamiento que se aplica a estos enfermos en el Instituto, es la resultante de la evolución clínica del proceso, para lo cual se consideran los enfermos que han de ser tratados quirúrgicamente y los que serán tratados por radioterapia.

A este respecto, en una información hecha en el año 1939[20] decíamos:

"En este Instituto se ha aplicado tanto la cirugía como este tratamiento en el cáncer de la laringe, desde hace más de 15 años, en forma amplia, tomando los enfermos en todo estado de evolución; algunos localizados solamente en el órgano de origen y otros con metástasis ganglionaries múltiples. Todo ésto nos ha permitido formarnos un concepto de todo lo que puede rendir la radioterapia, para una localización tan grave del carcinoma; concepto que no comparte, por cierto, ni el optimismo de unos ni el pesimismo de los otros."

"Reconocemos, sin embargo, que los buenos resultados que se obtienen durante los primeros meses de la irradiación, los que a veces son tan satisfactorios (48.7 % de cicatrización dentro del año), que llevan fácilmente al entusiasmo por este medio de tratamiento. Pero la experiencia adquirida con el numeroso lote de enfermos tratados, nos ha proporcionado los elementos de autocrítica para restarle el valor de *un medio de curación definitivo, en el concepto cancerológico.* Porque cicatrización, no es en el cáncer, sinónimo de curación, como sucede con otros procesos."

"La cicatrización no es en la mayoría de los casos, sino una etapa del proceso, la que, si puede ser definitiva, muchas veces es recidivante. Sólo se puede hablar de curación en cancerología, de acuerdo con lo que indica la experiencia, cuando ésta se prolonga por más de 5 años sin presentar un nuevo proceso neoplásico, y ello con ciertas reservas."

Por todo ello los enfermos de cáncer de laringe que llegan al Instituto, una vez que se ha efectuado el diagnóstico clínico y establecido las condiciones anatomopatológicas del caso y se ha efectuado la biopsia correspondiente, se dividen en

dos grandes grupos: el destinado al tratamiento quirúrgico, y aquel en que los pacientes han der ser sometidos a la acción de la radioterapia.

En el Instituto se considera pues de elección, el tratamiento quirúrgico que consiste en las diversas variedades de laringectomías, simples o ampliadas, según la extensión y la modalidad del tumor de que después hablaremos. No obstante y dado que la laringectomía es una operación de gran importancia y de enorme repercusión sobre el organismo, se la reserva a los casos en que las condiciones locales y generales permiten la operación en forma tal que se la pueda hacer en condiciones que aseguren el éxito casi constante. Se desechan todos los casos en que, dadas las malas condiciones generales del paciente o la existencia de contraindicaciones de orden general, hacer una extirpación de la laringe serviría sólo para abreviar la vida del enfermo o para comprometerla seriamente.

Se desechan también aquellos casos en que la extensión local del tumor es tal que todo intento de exéresis completa debe considerarse imposible. Entre estos casos deben agruparse aquellos afectos de propagación a los órganos vecinos y los que llevan consigo propagación ganglionar. Todo cáncer que ha salido de la celda laríngea debe considerarse ya como un caso muy grave y poco apropósito para el tratamiento quirúrgico, que debe ser siempre la extirpación total del tumor. Sólo pueden exceptuarse de caer en este caso los cánceres de la epiglotis, que aun cuando hayan invadido la base de la lengua, es decir que han salido del estuche laríngeo, son en una gran proporción de casos susceptibles de ser extirpados con éxcito.

Por desgracia el número de casos de enfermos de cáncer de la laringe que llegan al Instituto en condiciones tales que todo intento de tratamiento quirúrgico resulta imposible es grande. En esto intervienen diversos factores que contribuyen a la demora a veces considerable con que se efectúa el tratamiento correspondiente, sobre los cuales hemos de insistir en otra oportunidad.

Otras veces las condiciones del paciente son malas y no son a propósito para soportar una laringectomía. Ello es debido a malas condiciones de nutrición del paciente, a su edad avanzada, o a enfermedades a taras orgánicas asociadas, tan comunes en la edad avanzada de la vida en que con frecuencia se presenta el cáncer de laringe.

Es verdad que consideramos que la cirugía constituye el único recurso capaz de curar a un enfermo de cáncer de laringe. Por oposición a ella el tratamiento médico nada puede hacer y el tratamiento radioterápico, que debe considerarse aun en estudio y en el período de ensayos, sólo puede dar mejorías, detenciones de la evolución del tumor y tal vez en algún caso raro de indicación muy precisa alguna curación. Es por ello que, dado que la radioterapia puede aliviar la situación de muchos pacientes, deteniendo la evolución del tumor, aun cuando no se consiga la curación, y que por otra parte la cirugía supone un cierto número de riesgos, que al establecer las indiciones de cada caso hacemos un detenido estudio de las ventajas e inconvenientes que ofrecen, la cirugía por una parte, la radioterapia por otra. Nuestra tendencia sería operar *todos* los casos, convencidos como estamos de que la cirugía es en la actualidad el único tratamiento efectivo del cáncer de laringe. Pero no podemos cerrar los ojos a la realidad y negar que la cirugía tiene también muchos inconvenientes. Si aplicáramos la cirugía en todos los casos, convencidos como estamos de cuales no haríamos sino agravar la situación, aumentando los sufrimientos del paciente y acortando su vida. Es por

ello que sólo aplicamos la operación a un número restringido de casos, en aquellos en que estamos seguros del éxito.

Dada la índole de esta Asamblea, que tiene el caracter exclusivo de exponer las activividades quirúrgicas, haremos a continuación un relato sobre la práctica operatoria que se sigue en el Instituto de Medicina Experimental.

LA CIRUGIA

El tratamiento quirúrgico del cáncer de la laringe puede efectuarse en dos formas: (1) Tratamiento paliativo: traqueotomía; (2) Tratamiento radical.

1. El tratamiento paliativo consiste casi exclusivamente en la práctica de la traqueotomía, destinada a abrir una vía supletoria al paso del aire, impedido de hacerlo por las vías naturales debido a la oclusión causada por el tumor.

Otras veces el tratamiento quirúrgico-paliativo consiste en el drenaje de abscesos, de adenitis supuradas o en la extirpación de ganglios que amenazan ulcerarse. Estas pequeñas intervenciones, complementarias del tratamiento médico o radioterápico, no merecen, por lo banales, comentario ulterior.

LA TRAQUEOTOMIA

La traqueotomía se efectúa en el Instituto de Medicina Experimental: (1) a título paliativo en el curso del tratamiento médico o radioterápico del cáncer de la laringe; (2) como operación previa a la laringectomía. No debe creerse que la traqueotomía sólo se aplica a los cánceres de la laringe que ya han resultado inoperables. Por el contrario, son los cánceres endolaríngeos los que con más frecuencia producen oclusión laríngea y hacen necesaria la traqueotomía, y son precisamente ellos los que con más facilidad y mayor éxito son tratados por la cirugía. Por el contrario, los cánceres exolaríngeos, los de la corona superior de la laringe y en especial de la epiglotis, que son los más frecuentes, sólo por excepción producen oclusión laríngea y requieren por tanto una traqueotomía. Por otra parte son los que, cuando se operan exigen operaciones más riesgosas y dan mayor número de accidentes post-operatorios y mayor número, asímismo, de recidivas.

Los tumores endolaríngeos, cuando no han sido operados antes de producir oclusión laríngea, suelen requerir una traqueotomía a fin de permitir la entrada del aire. En muchos casos, sin que la traqueotomía sea de urgencia, las condiciones locales son tales que no permiten la preparación pre-operatoria previa a la laringectomía. Por más que se ha practicado la laringectomía de urgencia, no creemos que esta sea un criterio que deba generalizarse, ni que muchos enfermos estén en condiciones de soportar una laringectomía practicada en período de intensa anoxia y sin la preparación pre-operatoria que consideramos requisito indispensable.

Por otra parte ya hemos dicho en otro lugar que la traqueotomía, aun cuando no sea en verdad indispensable desde el punto de vista de la situación local, sino solamente de necesidad relativa, es de utilidad desde el punto de vista de la preparación del enfermo para soportar la laringectomía. La oclusión traqueal crea siempre un estado de anoxia que debe corregirse antes de efectuarse una operación de cirugía mayor. La oclusión traqueal, por otra parte, suele crear y entretener un estado de bronquitis crónica muco-purulenta que debe corregirse antes de efectuarse una laringectomía, porque su presencia no es precisamente una condición favorable a la buena evolución general y local de un enfermo operado de laringectomía. Además, es necesario saber que la existencia de una traqueotomía no impide la práctica de una laringectomía. Sólo la hace ligeramente más difícil, sin que estas dificultades estén por encima de

una técnica correcta. Cuando la traqueotomía se ha hecho en forma adecuada, con una técnica especial y en vista de una laringectomía ulterior, la operación resulta en verdad facilitada.

Tenemos pues: (1) Traqueotomía como único tratamiento: (a) de urgencia; (b) sin urgencia; y (2) Traqueotomía que ha sido seguida de laringectomía.

En el Instituto se han efectuado desde 1931 hasta la fecha, traqueotomías repartidas en la siguiente forma:

1931	31 casos	1936	51 casos
1932	40 "	1937	33 "
1933	51 "	1938	37 "
1934	37 "	1939	37 "
1935	36 "	1940	57 "

De este total de 410 traqueotomías, 168 han sido catalogadas en los protocolos operatorios y en los libros del Servicio de Cirugía como traqueotomías de urgencia; es decir, se trataba de enfermos en los que la dificultad respiratoria era tal que la apertura de la tráquea era de imprescindible necesidad a breve plazo. La mayoría de ellos eran enfermos que venían al Instituto por primera vez o que habiendo estado en tratamiento en el mismo habían dejado de concurrir, por diferentes razones, por algún tiempo. Las otras traqueotomías han sido practicadas sin urgencia, en vista de una dificultad respiratoria progresivamente creciente.

23 de los pacientes que han sido sometidos a traqueotomías fueron ulteriormente tratados por la extirpación de su laringe.

LA LARINGECTOMIA

Generalidades: Al tratar de la laringectomía deben considerarse dos puntos: (1) Las indicaciones y los resultados de la laringectomía en comparación con los indicaciones y los resultados del tratamiento roentgenoterápico del cáncer laríngeo; (2) consideraciones sobre la técnica.

Hasta hace algunos años la cirugía era el único recurso con que podía auxiliarse a los pacientes afectados de un cáncer de la laringe y el problema consistía en hacer operaciones cada vez más extendidas o en renunciar a tentar un tratamiento radical. Ahora contamos con el recurso de la radioterapia, que en estos últimos años ha demostrado ser capaz de curar o *detener la evolución* de algunos cánceres de la laringe. Recién ahora pueden ofrecerse algunos ejemplos de ello que lleven el tiempo necesario para considerar duradero este resultado. Su número es muy pepueño en relación al número de casos en que se aplica la terapéutica roentgenológica.

En cambio la laringectomía es una operación en que los buenos resultados se presentan en proporción considerable. Si se descuentan los casos de muerte operatoria y las recidivas post-operatorias, queda un elevado tanto por ciento de curaciones definitivas que pueden estimarse entre el 40 y 50% de los casos operados.

Por desgracia la laringectomía ofrece dos grandes escollos: (1) es una operación mutiladora; (2) no puede ser aplicada a todos los pacientes. Veremos que la mutilación que significa la pérdida de la voz puede ser compensada en gran parte por la educación del paciente, que le permite adquirir una nueva voz por un mecanismo distinto que el normal. En lo referente a las contraindicaciones de la laringectomía, son de dos órdenes: de orden local y de orden general.

Las contraindicaciones de orden local son las provenientes de la extensión del tumor, es decir, de su tardía llegada al cirujano o de que se ha perdido el tiempo en contemplaciones o en ensayos terapéuticos infructuosos. Todas estas contraindicaciones han de disminuir merced a intensas campañas de propaganda anticancerosa y a la educación apropiada del médico y de las masas.

Las contraindicaciones de orden general dependen de la edad del paciente o de la coexistencia de otras lesiones o taras orgánicas o funcionales, cosa muy frecuente si se tiene en cuenta que el mayor número de estos pacientes han pasado los cuarenta y cinco años, es decir, están en la etapa final de la vida en que comienzan o se desarrollan en su mayor auge todas las lesiones de orden tóxico, infeccioso o discrásico acumuladas durante su curso.

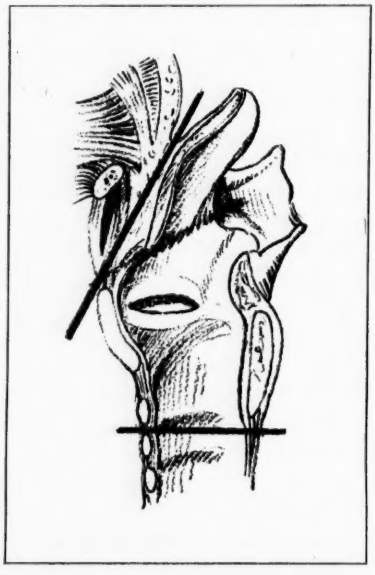
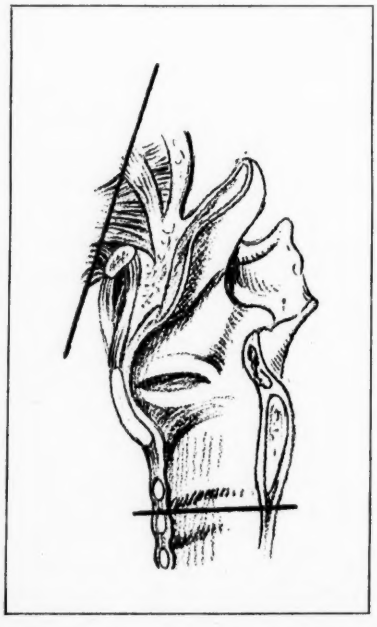


Fig. 1. a. Esquema que demuestra las dos variedades más frecuentes de la laringectomía de acuerdo con su extensión. a. Laringectomía simple para los tumores endolaríngeos.

Pero una técnica médica y quirúrgica cada vez más precisas y una organización hospitalaria cada vez más eficiente, han de tornar las cosas de tal modo que podamos ofrecer esta operación, grande y riesgosa, a un número cada vez mayor de enfermos, es decir que podamos extender sus indicaciones sin aumentar sus riesgos.

Podemos resumir aproximadamente las indicaciones actuales de la laringectomía y de la radioterapia en esta forma: (1) la *laringectomía* está indicada en casi todos los carcinomas endolaríngeos, cuando no existen contraindicaciones de orden local o general. (2) La radioterapia y la laringectomía comparten el tratamiento de los cánceres localizados en la epiglotis. Esperamos que se pueda demostrar pronto que esta indicación está dada por el estudio histológico. En la práctica, cuando se trata de un tumor muy anaplásico de la epiglotis, vale más no operar al enfermo porque la recidiva local es casi fatal, aparte de que la operación, que debe comprender una parte de la lengua, es grave y comporta una pesada mortalidad. Cuando se trata de un carcinoma bien diferenciado, que es por otra parte poco radiosensible, está indicada la operación. Por supuesto se descuentan las contraindicaciones locales y generales de la misma. (3) Cuando el cáncer ha salido de su estuche laríngeo;



b. Laringectomía àmpliada por extirpación del hueso hioides, de espacio hioglosoepiglótico y de la base de la lengua para los cánceres de la epiglotis.

cuando hay perforación o destrucción parcial del mismo, cuando hay adenopatías cervicales o a distancia, cuando existen contraindicaciones de orden general, debe hacerse radioterapia, aunque sea a título paliativo. Es posible que su perfeccionamiento la lleve a ser curativa en un número mayor de casos y que sus indicaciones puedan extenderse cada vez más.

Consideraciones generales sobre la técnica y la táctica operatoria. Desde el punto de vista de la extensión de la parte extirpada, deben clasificarse las laringectomías en la siguiente forma:

1. Laringectomía simple, con o sin extirpación de la epiglotis (Fig. 1).

2. Laringectomías ampliadas. (Fig. 1).

(a) por la extirpación del espacio pre-epiglótico.

(b) por la extirpación parcial de la lengua.

(c) por la extirpación de una porción de la faringe.

(d) por la extirpación de una porción del esófago.

3. Laringectomías complicadas.

(a) por la extirpación de los ganglios del cuello.

(b) por la extirpación del cuerpo tiroides.

(c) por extirpación total de la lengua.

(d) por extirpación de la glándula submaxilar.

Esta clasificación combina las de Molinié y de Bisi.

Debemos apresurarnos a agregar que hoy ya no encuentran justificación, o sólo la encuentran excepcionalmente, estas *laringectomías complicadas,* que deben ser consideradas como recuerdo de una época en que la cirugía, a beneficio de la incipiente asepsia, atacaba empresas cada vez más grandes y más árduas y el cirujano parecía tanto más satisfecho de sí mismo cuanto más grande había sido la mutilación o mayor el tumor extirpado.

Estas operaciones ya no encuentran justificativo en la actualidad porque se ha comprobado que los enormes riesgos que hacen correr al enfermo no están compensados por una curación duradera. Hoy se dispone de la radioterapia, que, si no puede curar a estos pacientes, puede mejorarlos o por lo menos hacer por ellos más de lo que puede la cirugía.

En cambio, las operaciones que corresponden a los grupos primeros (laringectomías simples y laringectomías ampliadas), son justificables desde todo punto de vista. Las primeras encuentran su indicación formal en los casos de cáncer endolaríngeo, sin propagación ganglionar. Las laringectomías ampliadas pueden tener indicaciones que deben discutirse. Se deben aplicar en los casos de cáncer de la epiglotis y en algunos tumores supraglóticos no muy extendidos pero que sin embargo han invadido la pared faríngea o esofágica, cuando no hay propagación ganglionar a general. En estos casos debe hacerse un minucioso balance acerca de las ventajas e inconvenientes que ofrecen la cirugía y la radioterapia. Como ya hemos dicho, esperamos poder demostrar en un trabajo ulterior, que la indicación terapéutica ha de desprenderse de la naturaleza histológica del tumor: radioterapia para los tumores muy indiferenciados; cirugía para los tumores diferenciados. Actualmente éste es para nosotros una impresión clínica, pero no nos atrevemos a afirmarlo hasta haber efectuado una completa revisión de los enfermos tratados.

Las técnicas de las laringectomías son múltiples. Todas ellas tienden a evitar o a disminuir sus inconvenientes, derivados de la necesidad de abrir y reconstruir un órgano hueco fuertemente séptico como es la faringe y cuya sutura no

siempre es eficaz. Es necesario tener en cuenta que la sutura de la faringe sólo es eficaz en su totalidad en un número mínimo de casos, inferior siempre a la décima parte de los casos operados, pero no obstante, no conviene renunciar a ella porque en la generalidad de los casos la desunión no es total sino totalmiente parcial y el enfermo se beneficia grandemente de esta reconstrucción parcial del órgano. La desunión de la faringe se debe a causas de dos órdenes, de valor distinto en cada caso pero que siempre concurren: la sepsia y la necrosis por una parte; por otra parte la presión intrafaríngea durante los inevitables movimientos de la deglución, que hacen estallar la sutura. En una operación bien conducida, las fístulas faríngeas deben comprometer el mínimo el post-operatorio y deben permitir una rápida curación por segunda intención a poco costo para el enfermo. De esta dificultad de conservar intacta la sutura faríngea han nacido una cantidad de modalidades técnicas. Otras han nacido de la necesidad de abocar al exterior la tráquea con todas las consecuencias para el aparato respiratorio que son conocidas y se engloban bajo la denominación general de infecciones agudas broncopulmonares. Hemos de comentar este asunto al hablar de la traqueotomía previa.

Pueden clasificarse las técnicas operatorias para efectuar la laringectomía en la siguiente forma: (1) Técnicas en un tiempo. (2) Técnicas en dos tiempos.

Operaciones en un tiempo. Hay dos variedades fundamentales de operaciones en un tiempo:

(a) Aquellas en que en un solo tiempo operatorio el cirujano extirpa la laringe, aboca la tráquea a la piel, cierra la faringe y sutura los tegumentos, conservando las aperturas que juzgue necesarias para el drenaje. Nos ocuparemos extensamente de esta variedad técnica puesto que es la habitual, con sus diversas modalidades, y la que ha obtenido mayor número de éxitos. Es la que practica la casi generalidad de los cirujanos.

(b) La laringectomía ideal de Foederl en la que, una vez efectuada la extirpación de la laringe, pero conservada la epiglotis, se sutura ésta a la tráquea y se pretende reconstruir la situación anatómica (Fig. 2). Operación teórica que parece no haber dado resultados a juzgar por el hecho de no haberse difundido, y de haberse hecho el silencio después de las publicaciones iniciales. A priori, los inconvenientes que han de resultar de esta plástica laríngea, la hacen condenar.

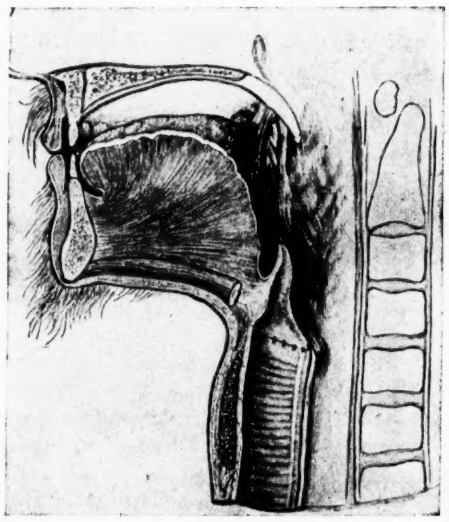


Fig. 2. (Föderel, 19) Esquema de la operación de Föderel, laringectomía ideal, con reconstrucción de la laringe a expensas de la tráquea y de la epiglosis conservada.

Operaciones en dos tiempos. Consisten en la división del acto quirúrgico en dos etapas distintas, separadas por un intervalo variable de una a varias semanas, a fin de disminuir su gravedad.

(a) Una serie de técnicas operatorias hacen de la traqueotomía el primer tiempo. Desde los estudios de Sebileauy y sus colaboradores a principio del

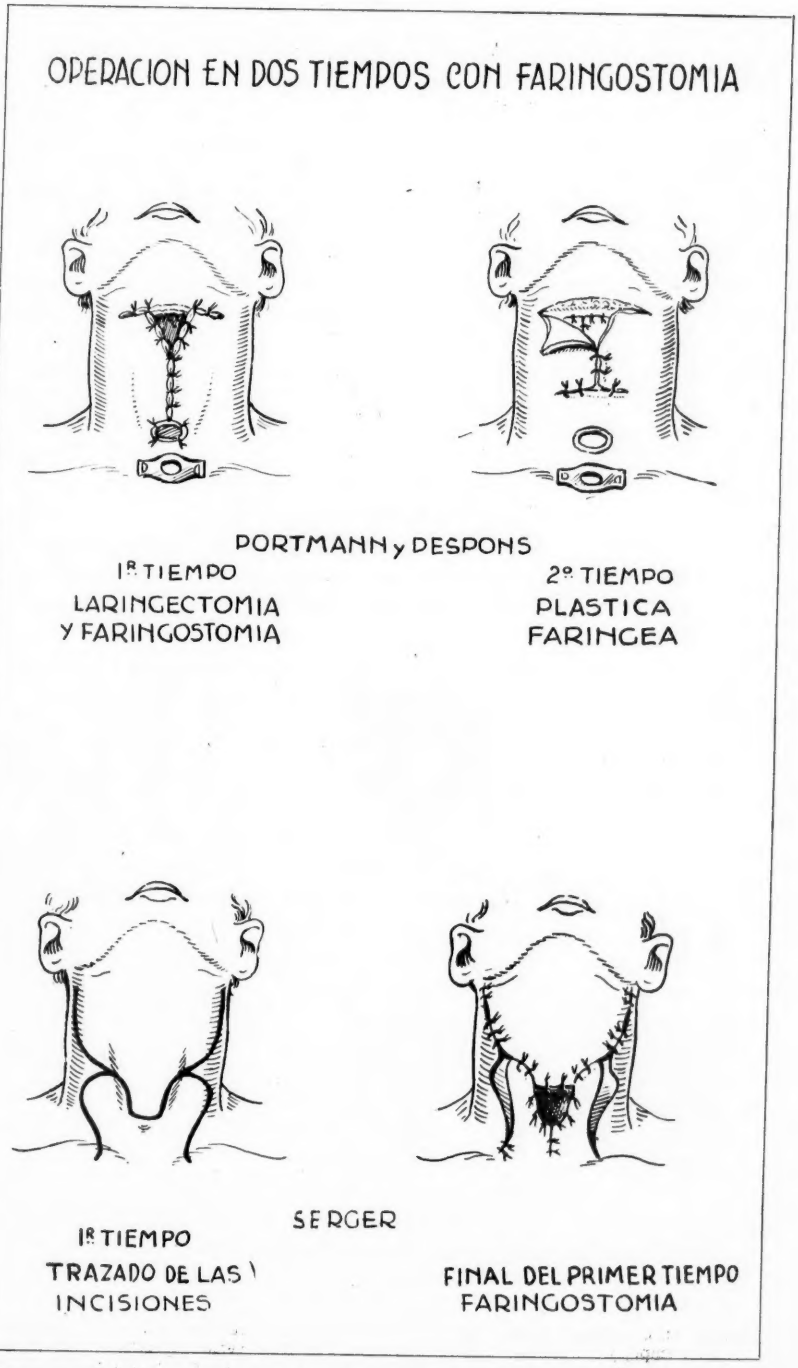


Fig. 3. Esquema que muestra dos variedades técnicas de operación en dos tiempos con faringostomía.

siglo, la traqueotomía previa ha gozado de gran crédito, y muchos autores hacen uso de ella en la actualidad. Gussio acaba de describir una técnica de laringectomía en la que la traqueotomía constituye el primer tiempo. Insistiremos acerca de las ventajas y los inconvenientes de la traqueotomía previa al hablar de los detalles de técnica.

(b) Otros autores, dando por segura la apertura y fistulización de la faringe, efectúan la operación de tal modo que la faringe queda abierta al exterior por sutura de los bordes de la apertura faríngea a la piel, hecha al modo cómo se marsupializa una cavidad quística. Esta *faringostomía* permite la salida al exterior de la saliva y hace que la cicatrización de los colgajos pueda efectuarse después de escasa o ninguna infección. Se le cierra en un segundo tiempo operatorio (Fig. 3). Esta técnica ha sido preconizada por Portman y otros cirujanos de la escuela de Burdeos, por Serger, de Zagreb etc.

(c) En una tercera modalidad técnica de operación en dos tiempos, New se inspira en una concepción completamente distinta. Este autor efectúa un primer tiempo operatorio en el que diseca la laringe sin extirparla y cierra totalmente la herida, dejando al descubierto una parte de la tráquea; dos días más tarde efectúa la traqueotomía. Permite así una

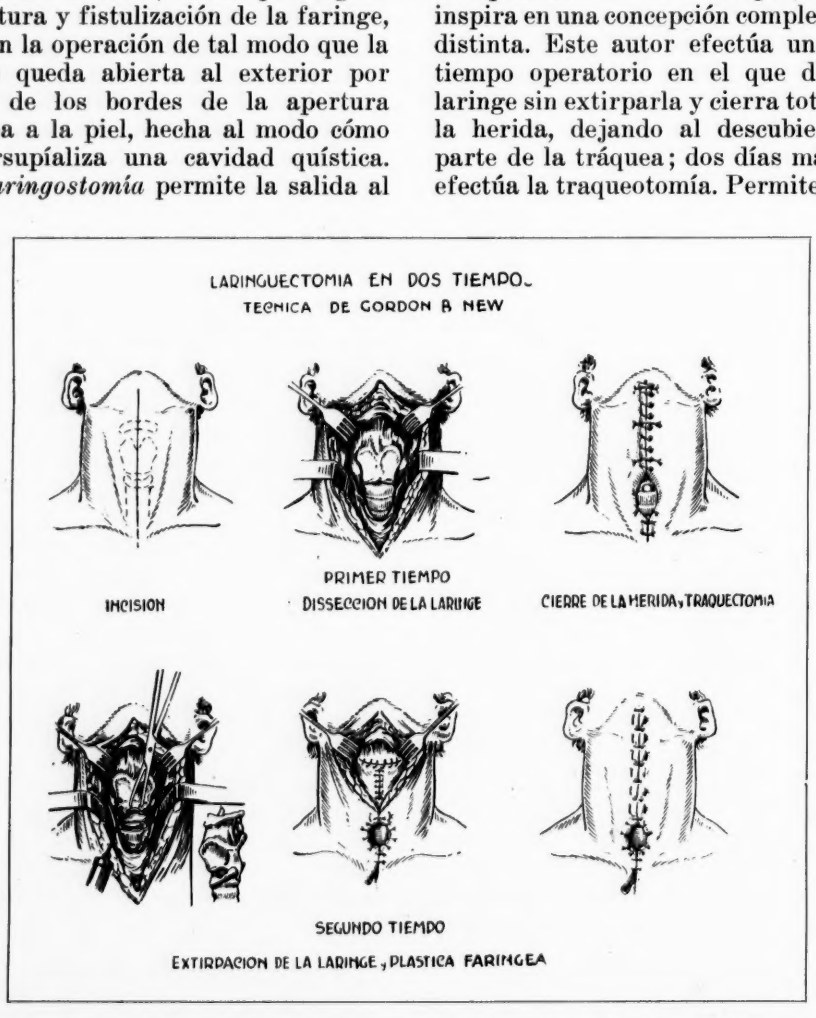


Fig. 4. Operación en dos tiempos según la técnica de New. En la técnica de New se diseca parcialmente la laringe en el primer tiempo, y se permite la infección atenuada de la herida operatoria. En el segundo tiempo se extirpa la laringe. La operación encuentra así tejidos modificados en sus reacciones de inmunidad por la infección anterior y resulta, según la concepción del autor, más benigna.

infección atenuada de la herida que se produce en el intervalo de los dos tiempos operatorios. En el 2° de ellos efectúa la extirpación de la laringe, que siendo una operación necesariamente séptica no se efectúa poniendo en contacto la cavidad faríngea con el tejido celular virgen de infección, sino con un tejido de granulación resultante de la operación anterior y que, según el autor, encuentra al enfermo vacunado contra su propria infección. En esta forma el autor asegura luchar muy eficazmente contra la infección de los planos intersticiales (Fig. 4). No podemos comentar esta modalidad operatoria porque no tenemos experiencia alguna en ella, pero nos parece extraña y contraria a la habitual modalidad quirúrgica.

En la actualidad la laringectomía en un tiempo es la operación más generalizada y en la que tenemos más vasta experiencia.

La mayoría de las laringectomías operadas en el Instituto de Medicina Experimental lo han sido por este procedimiento. Sólo por excepción se ha efectuado la traqueotomía previa, no por intento sino porque ha sido necesario para corregir la insuficiencia respiratoria del enfermo.

Esta operación puede efectuarse en dos formas fundamentales conocidas con el nombre de los cirujanos que reglaron ambas técnicas: laringectomía de abajo hacia arriba o técnica de Perier y de arriba hacia abajo o técnica de Gluck.

La mayor parte de los autores insisten en dar más crédito a la laringectomía de arriba hacia abajo, es decir, que una vez descubierta a aislada la laringe, se efectúa la sección de la faringe, la separación de la laringe de su implantación faríngea y se termina por seccionar la tráquea. Los autores que argumentan en favor de esta modalidad técnica, dicen que es la mejor para evitar la caída de sangre en el árbol aéreo.

La otra técnica, con sección primera de la tráquea y disección del órgano de abajo hacia arriba, es la preconizada por Perier y Moure. Es la que preferimos.

La operación hecha de abajo hacia arriba permite observar con mayor precisión las condiciones anatómicas; permite una más minuciosa disección del órgano, y una mayor conservación de las paredes de la faringe. Finalmente, cuando se trata de un cáncer de la epiglotis, es la que permite realizar una glosectomía parcial sin peligro de caer en plena maza tumoral. El argumento de que la sección primera de la tráquea puede permitir la caída de sangre al árbol respiratorio, no tiene valor. Basta una elemental precaución, entre las que está la hemostasia rigurosa, para evitar esto.

Aparte esta doble modalidad técnica, todas las variedades de las laringectomías se diferencian entre sí por la forma y la disposición de la incisión cutánea y por la forma de abocamiento de la tráquea a la piel. Las variantes de las incisiones cutáneas tienen por objeto evitar la producción de fístulas y gobernar y facilitar su curación cuando éstas se producen. Cada autor ha interpretado las cosas de un modo particular y cada uno ha tratado de resolver las dificultades a su modo. En verdad, cualquier incisión permite la extirpación de la laringe. La importante es que las curaciones se puedan efectuar con eficiencia y si hay fístulas que curen en la forma más breve que sea posible. Una maniobra destinada a evitar inconvenientes ulteriores es la que consiste en abocar el orificio de la tráquea, no en la misma cicatriz operatoria, sino en una pequeña incisión u ojal efectuado dos o tres centímetros más abajo. immediatamente por arriba de la horquilla esternal. En esta forma se evita, a mejor dicho se trata de evitar, la producción de fístulas que se abren a nivel del traqueostoma y durante

el período en que se producen escaras, necrosis y supuración abundante, se trata de evitar que estos exudados caigan en la tráquea. Es sabido que este es un inconveniente que puede tener la mayor gravedad por cuanto dá origen con frecuencia, a complicaciones pulmonares sépticas muy graves.

De esta doble necesidad han nacido la multiplicidad de incisiones y técnicas operatorias. Hemos pretendido resumir la mayor parte de ellas en la Fig. 5.

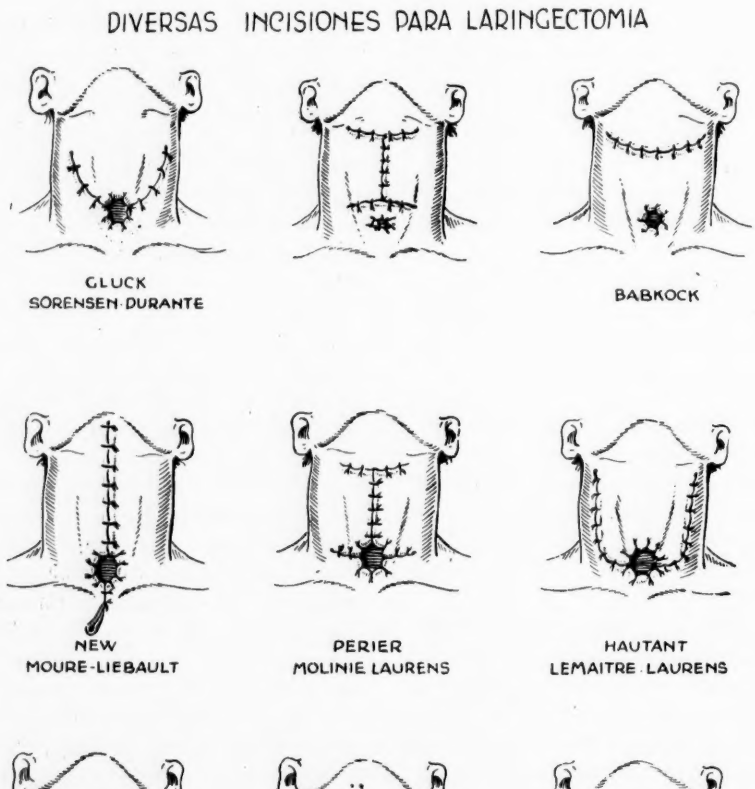


Fig. 5. Esquema que muestra los tipos de incisión más frecuentes que se usan para practicar la laringectomía.

Las más difundidas son las siguientes: incisión en U de Sorensen; incisión en H acostalada, es decir, doble colgajo a charnela lateral; incisión a colgajo simple a charnela lateral.

El doble colgajo a charnelas laterales, es decir, incisión en H horizontal, es lo que usamos corrientemente. Después de haber usado repetidas veces la incisión de Sorensen en U y la técnica de Babcock, es decir, una simple incisión horizontal a nivel de la parte media del cartílago tiroides, con abocamiento de la tráquea en un orificio suplementario, hemos adoptado la incisión en H horizontal. He aquí las razones que nos han inducido a ello: la incisión en H horizontal es la que dá mejor acceso a la parte superior del campo operatorio, que es donde reside la parte más delicada e importante de la operación. Cuando se trata de una laringectomía simple, no tiene mayores dificultades el acceso a la región del hueso hioides, pero cuando se trata de un cáncer de la epiglotis, la parte alta del campo operatorio es la que más dificultades ofrece. Es necesario extirpar el hueso hioides en su totalidad; es necesario extirpar el espacio preepiglótico y una parte de la base de la lengua. Debe efectuarse la ligadura previa de ambas arterias linguales con el ángulo de Beclère y debe efectuarse una hemostasia minuciosa. Finalmente, la reconstrucción de la faringe ofrece dificultades debido a la amplitud de la parte extirpada. En estas condiciones sólo una incisión alta puede dar un amplio campo operatorio. Este no se consigue sino penosamente con la incisión de tipo Sorensen o de tipo Babcock.

Nuestra experiencia personal en el Instituto de Medicina Experimental, proviene del estudio de más de 254 laringectomías que se han operado desde 1927, de las cuales la última serie ha sido operada personalmente por nosotros.

He aquí como efectuamos la operación de acuerdo con esta experiencia.

PREOPERATORIO

El preoperatorio de la laringectomía es el de toda gran operación de cirugía mayor al que deben imprimírsele algunas particulares precauciones debido a las características propias de esta operación y que tienen su origen en: (1) La apertura de la tráquea al exterior, lo que ocasiona con frecuencia serias complicaciones en el campo broncopulmonar; (2) La frecuente caída de sangre en el árbol traqueo-bronquial, lo que repercute en igual sentido y produce o contribuye a la producción de las mismas complicaciones; (3) Las circunstancias de tratarse de una operación séptica en que debe abrirse y reconstruirse la faringe, hace que, así en el momento de la operación como en el post-operatorio, se pongan en contacto las secreciones sépticas de la faringe con los especios celulosos del cuello. Se sabe cuán importante puede ser esa repercusión.

Las modalidades del preoperatorio deben, como decimos, contemplar estas circunstancias.

Debe controlarse el estado humoral y sanguíneo como en toda operación de gran cirugía. La diabetes debe considerarse como una contraindicación de gran importancia; el cirujano debe saber que sólo puede emprender una laringectomía en un diabético, aun cuando el régimen y la insulinoterapia lo hayan llevado a la normal desde el punto de vista humoral y secretorio, con enormes riesgos.

Se debe ser extremadamente riguroso en la higiene bucal. Consideramos que no debe tolerarse ningún foco séptico bucal, puesto que será capaz de poner en peligro la evolución post-operatoria del enfermo. El cirujano que comienza la práctica de sus laringectomías podrá ver que sus éxitos son cada vez mejores

y sus post-operatorios más simples y más breves a medida que aprende a efectuar con más eficacia la limpieza bucal. No deben tolerarse caries ni piorrea. Los dientes careados deben ser extirpados u obturados; los dientes afectos de piorrea deben ser extirpados. La operación se efectuará unos quince días más cuando las encias estén cicatrizadas. Igualmente deberá someterse al enfermo a la limpieza dentaria efectuada por el dentista y a la extracción del sarro. Acostumbramos completar esta higiene bucal por medio de lavados frecuentes de la dentadura con pastas dentífricas a base de arsenicales, cuya acción espirilicida es conocida, y por la inyección intramuscular de sales de bismuto, tal como lo aconseja Babcock.

El mismo rigorismo que exige la septicidad dentaria ponemos en práctica con respecto a otros focos sépticos de origen nasal: sinusal o amigdalin. Por fortuna son infinitamente menos frecuentes que las lesiones, dentarias, pero cuando existen consideramos que contraindican temporariamente la operación.

En lo referente al resto de la preparación preoperatoria es el que corresponde a toda gran intervención. Una particular atención debe prestarse al estado bronquial y esto por dos razones. Un estado de infección bronquial significa un grave peligro no sólo para el pulmón, por la imminecia de complicaciones pulmonares graves una vez efectuada la laringectomía, sino también por el peligro que implica la contaminación de la herida cutáneo-traqueal por las secreciones del árbol bronquial. Por ello debe postergarse temporariamente la operación en todo enfermo afecto de bronquitis muco-purulenta, hasta tanto ésta no haya desaparecido o cedido casi por completo.

Por estas mismas circunstancias es que la traqueotomía previa a la laringectomía debe incluirse entre los requisitos del preoperatorio por dos órdenes de circunstancias: (1) Cuando hay obstrucción laríngea y el estado del enfermo no permite efectuar una laringectomía; (2) Cuando sin que sea muy grave la obstrucción laríngea, ésta entretiene un estado de bronquitis crónica por obstrucción. La traqueotomía previa a la laringectomía es un elemento importante en la curación de esta bronquitis crónica. Por ello debe deducirse que la traqueotomía no sólo debe aplicarse a título paliativo en casos graves o desesperados de cáncer de laringe, sino que debe aplicarse en muchos casos de cáncer endolaríngeo que son perfectamente curables por la cirugía. Son precisamente esos cánceres endolaríngeos los que con mayor éxito pueden ser operados y son ellos los que con mayor frecuencia producen obstrucción laríngea.

Hoy es un hecho que todos los cirujanos operan el cáncer de laringe con anestesia local. Acostumbramos a usar solución de novocaína al 1%. No encontramos ventajos en el uso de la solución anestésica al 2% y consideramos en cambio que ello significa la administración de una excesiva dosis de tóxico. Usamos la solución sin adrenalina: 1°, para evitar la hemorragia que suele producir la vasodilatación secundaria cuando cesa la acción de la adrenalina y que tendría graves inconvenientes en una región difícil de comprimir; 2°, para evitar la producción de necrosis en los músculos, la faringe y el esáfago por la acción combinada de la adrenalina con un terreno séptico.

TÉCNICA

Incisión en H horizontal (Fig. 6). La rama superior es una extensa herradura situada a nivel del hueso hioides o a un centímetro por encima de él. Hacia uno y otro lado llega a un centímetro por delante del borde anterior del esterno-cleido-mastoideo. La rama hori-

zontal inferior no es recta sino que describe una curva a concavidad inferior. Su parte media está situada a nivel del cartílago cricoides; sus extremos descienden hacia uno y otro lado sobre los cabos esternales de ambos esternocleido-mastoideos. En esta forma se traza un verdadero colgajo semicircular a base inferior en medio del cual se

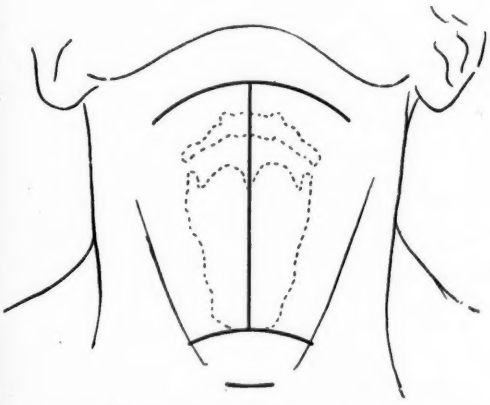


Fig. 6. Técnica de la laringectomía. Incisión cutánea. Incisión en H horizontal, cuya rama superior es una extensa herradura situada a nivel del hueso hioides ó a 1 cm. por encima del mismo. Hacia uno y otro lado llega a 1 cm. por delante de cada esternocleido-mastoideo. La rama horizontal inferior está situada a nivel del cartílago cricoides y describe una curva a concavidad inferior.

abrirá el orificio del traqueostoma. Los extremos de esta incisión curva, que constituyen la parte más declive de la herida, serán utilizados para el drenaje. Ambas incisiones transversales se unen en la línea media por una incisión vertical.

Incisión de la piel, el tejido celular subcutáneo y el músculo cutáneo. Hemostasia rigurosa. Practicamos esta incisión con el bisturí frío. Ambos colgajos son disecados hacia uno y otro lado hasta su base.

El segundo tiempo operatorio comprende la ligadura de ambas arterias linguales en el angulo de Beclère. Será necesario volcar la cabeza del paciente, ya en hiperextensión, hacia el lado contrario a aquel en que se procede a hacer la ligadura. La glándula submaxilar es reconocida y levantada en dirección cefálica con un separador romo, previa incisión de la aponeurosis cervical superficial que constituye su cápsula, a nivel de su borde inferior. Una vez levantada la glándula submaxilar, la zona de los triángulos de Beclère y de Pirogof queda al descubierto.

Será necesario inmovilizar el hueso hioides enganchándolo y traccionándolo hacia abajo con un separador de ganchos. Se secciona el milohioideo a nivel del asta mayor del hueso hioides y más atrás se procede asímismo a desinsertar el músculo hiogloso. A fin de no alterar las relaciones normales de la arteria lingual con el hueso, lo que conduciría a que la investigación ulterior de la arteria fuera muy difícil por falta de los puntos de referencia anatómicos, es conveniente

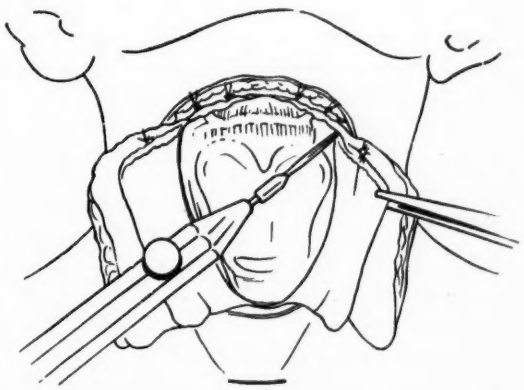


Fig. 7. Los músculos infrahioideos son extirpados desde el hueso hioides hasta la altura del cricoides. Realizamos esta extirpación y la hemostasia de los pequeños vasos con el bisturí eléctrico. Ligamos los vasos de importancia, en especial las yugulares anteriores. Quedan al descubierto el conducto laringotraqueal y, por arriba del mismo, el hueso hioides y la membrana tirohioidea. Por abajo quedan al descubierto los primeros anillos de la tráquea, que han quedado desnudos al retraerse hacia el esternón la porción inferior de los músculos infrahioideos seccionados.

seccionar el hiogloso, nó al ras del hueso hioides, sino a un centímetro por arriba del mismo. Esta sección debe hacerse en toda la longitud transversal del triángulo de Beclard. Luego se investigará la arteria lingual en el plano profundo del músculo hiogloso y se efctuará su doble ligadura y su sección.

La cabeza del enfermo se dá vuelta hacia el lado que se acaba de operar y se procederá a efectuar la ligadura de la otra arteria lingual. Una vez hecho esto, se colocará nuevamente la cabeza del enfermo en hiperextensión sin inclinación lateral y se procederá a efectuar la extirpición de la laringe.

Los músculos infrahioideos son extirpados desde el hueso hioides hasta la altura del cricoides (Fig. 7). En esta forma dejamos que la porción de los músculos que cubre la tráquea se retraiga hacia su inserción esternal y constitutya en esta forma un *tapón*. Para realizar esta extirpación nos valemos del bisturi eléctrico (Fig. 7) que utilizamos asímismo para coagular los pequeños vasos. Los casos de alguna importancia y en especial las yugulares anteriores, son ligados.

Queda así al descubierto el conducto laringo-traqueal y por arriba del mismo el hueso hioides y la membrana tirohiodea. Por abajo quedan al descubierto los primeros anillos de la tráquea, que han quedado denudos al retraerse hacia el esternón la porción inferior de los músculos infrahioideos seccionados.

Se moviliza de sus vinculaciones laterales, la laringe hasta poner bien al descubierto sus dos caras ántero-laterales.

Se secciona la tráquea o bien se la separa de la laringe a nivel del borde inferior del cricoides. La sección debe ser más baja cuando se trata de un tumor subglótico que cuando se trata de uno supraglótico. Consideramos que no hay ninguna ventaja en seccionar transversalmente el cartílago cricoides para dejar abocada al traqueostoma un anillo cartilaginoso completo formado por la parte inferior del mismo. Aparte de que la maniobra es difícil y deslucida, que el abocamiento a la piel se hace con dificultades, el anillo cricoideo siempre se elimina por necrosis del cartílago.

Antes de seccionar la tráquea, según dijimos, procedemos a dejar al descubierto una porción de ella de tres o cuatro centímetros a fin de hacer posible su abocamiento a la piel. Si el istmo del cuerpo tiroideo molesta lo separamos de la tráquea y lo reclinamos hacia abajo. En muchas ocasiones en que es grueso y suculento o en que hay hipertrofia del mismo, lo seccionamos verticalmente y hacemos hemostasia con puntos separados de catgut. Esta sección es necesaria para que no comprima ni aplaste la tráquea que ha debido incurvarse hacia adelante para ser abocada a la piel.

Antes de seccionar la tráquea efectuamos dos tiempos previos: (1) anestesia de la tráquea infiltrando con novocaína su pared e inyectando en el interior un centímetro cúbico de cocaína al 10 %; (2) en la foseta supraesternal, a 3 cms. por debajo de la incisión inferior, practicamos un ojal transversal de 3 cms. de longitud, destinado a recibir el orificio de la tráquea. Sección de la piel y del tejido celular subcutáneo; hemostasia. Con las tijeras curvas practicamos un túnel que llega hasta la cara anterior de la tráquea denudada. Es necesario que este túnel sea amplio y no esté cruzado por ninguna brida aponeurótica que luego podrá hacer muy difícil el abocamiento de la tráquea. La hemostasia será cuidadosa. Una vez efectuado el túnel se colocará en él un tapón de gasa y se pasará a efectuar la sección de la tráquea (Figs. 8 y 9).

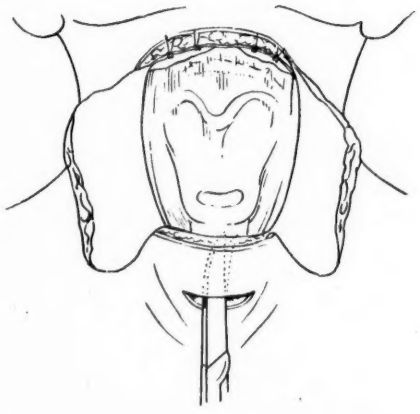


Fig. 8. Se prepara el orificio cutáneo para el abocamiento de la tráquea. En la foseta supraesternal, a 3 cms. por debajo de la incisión inferior, practicamos un ojal transversal de 3 cms. de longitud, destinado a recibir el orificio de la tráquea. Sección de la piel y del tejido celular subcutáneo. Con las tijeras romas practicamos un túnel que llega hasta la cara anterior de la tráquea. Taponamos este orificio con un trozo de gasa durante la ejecución del tiempo siguiente.

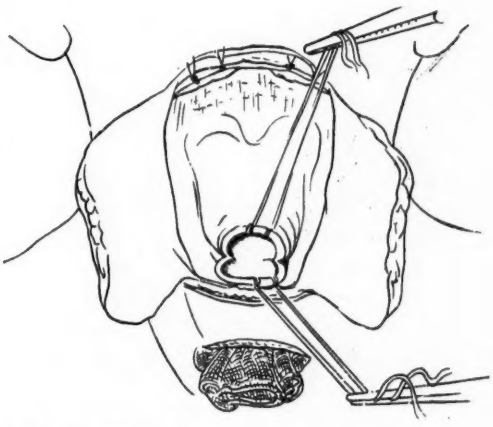


Fig. 9. Sección de la tráquea. Se comienza por efectuar la sección de su mitad anterior pasando por un espacio fibroso entre dos anillos cartilaginosos. Se colocan dos hilos que sirven de tractores, en cada labio de la apertura traqueal. Se completa la división de la tráquea por sección de la membrana posterior.

Efectuamos la sección de la tráquea con bisturí frío. Comenzamos por seccionar la semicircunferencia anterior y colocar en cada labio de esta incisión dos gruesos hilos de seda, que servirán de elemento de tracción. Luego alargamos paulatinamente esta incisión hasta llegar a la membrana posterior de la tráquea que infiltramos con novocaína y luego seccionamos a bisturí. Esta sección debe efectuarse con el cuidado necesario para no herir el esófago.

Terminada la sección traqueal, cada uno de los ayudantes tracciona de un par de hilos colocados en la tráquea y laringe y se separa por disección la tráquea de la cara anterior del esófago en una extensión de unos 3 cms. (Fig. 10). Debe hacerse minuciosamente la ligadura de las pequeñas arterias que se encuentran en esta zona. Como el borde de la sección traqueal sangra habitualmente, debe hacerse su hemostasia por medio de una suave electrocoagulación.

Durante todo este tiempo se evitará la caída de la sangre en la tráquea y se extraerán los coágulos que puedan haberse formado en el interior de ella. El orificio inferior de la faringe será taponado con una gasa a fin de evitar la caída de secreciones sépticas.

Se abocará la tráquea al orificio cutáneo haciendo pasar a través del mismo las sedas que han servido para la tracción y suturándola allí con 6 u 8 puntos en U de crin o seda (Fig. 11).

Terminada esta parte de la operación se vuelve a la laringe para terminar su extirpación. Ia tracción en dirección cefálica permite abordar su orificio inferior y el punto de unión con el esófago. Se separan ambos órganos en dirección cefálica hasta llegar a nivel de la faringe. En este momento se infiltran a uno y otro lado, a nivel de los bordes posteriores del cartílago tiroides, las masas carnosas de los constrictores de la faringe insertos en él. Se procede luego paulatinamente, de abajo hacia arriba, a seccionar las mismas con las tijeras curvas de Mayo haciendo de paso una

Fig. 10. La tráquea es librada de sus vinculaciones al esófago en una extensión de unos 3 cms., a fin de facilitar su abocamiento a la piel.

Fig. 11. Se aboca la tráquea al orificio cutáneo por medio de 6 á 8 puntos de afrontamiento con crin o seda.

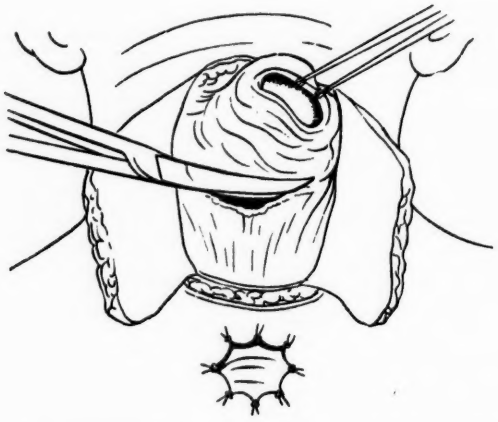


Fig. 13. Apertura de la faringe a nivel de su unión con la cara posterior de la laringe. Conviene comenzar esta apertura en este lugar, sobre todo en los tumores de la epiglotis, afin de no interesarlos en la sección y de poder hacer la extirpacion bajo el control de la vista, desde la cara faríngea hasta la profundidad.

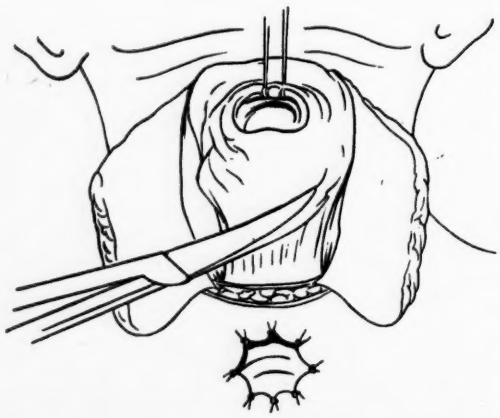


Fig. 12. Se diseca la laringe de abajo hacia arriba con las tijeras curvas. En la línea media se la separa del esófago y de la faringe. A uno y otro lado se seccionan las inserciones de los constrictores de la faringe en los bordes póstero-laterales del cartílago tiroides. En esta forma se llega, por uno y otro lado, hasta el cuerno del cartílago tiroides. Se verá la mucosa faríngea, al descubierto por su cara profunda abombando hacia la herida, distendida por el aire deglutido.

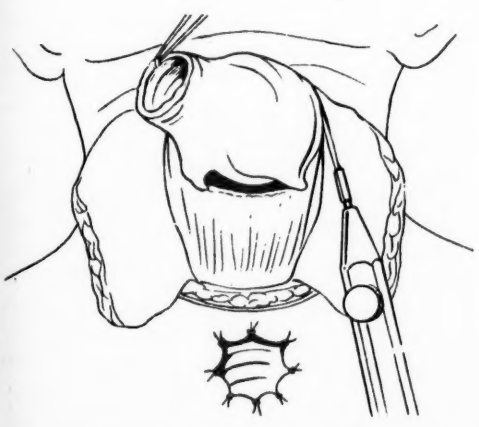
hemostasia minuciosa por medio de ligaduras (Fig. 12). En esta forma se llega por uno y otro lado hasta el cuerno del cartílago tiroides y en la línea media se habrá despegado la laringe de la faringe hasta donde es posible. En este lugar y hacia ambos lados, la mucosa faríngea quedará descubierta por su cara profunda; se le verá abombando hacia la herida distendida por el aire deglutido.

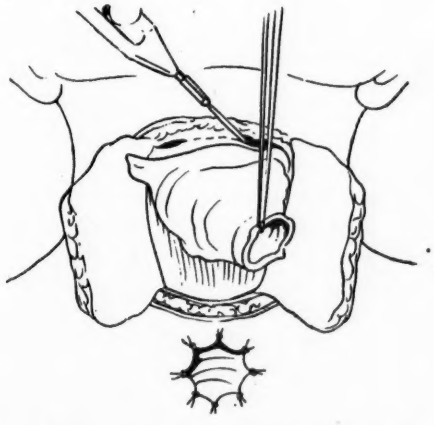
El tiempo siguiente consiste en la apertura de la faringe y la separación de la laringe de sus vinculaciones superiores (Fig. 13). Como el más minucioso examen laringoscópico no puede dar sino una idea fragmentaria e incompleta de la situación, extensión y disposición del tumor, cuando éste ocupa la porción supraglótica de la laringe, conviene siempre efectuar esta separación desde la cara bucal a fin de hacerla bajo el control de la vista.

Una vez abierta la faringe a nivel de la cara posterior de la laringe y hacia el borde superior del cartílago tiroides, cerca de uno de los cuernos, se verá el

límite interior de la faringe, el orificio superior de la laringe con la epiglotis y la base de la lengua. Se efectuará la extirpación de la laringe con el tumor comenzando por uno de los lados, el que resultare más facil, y dirigiéndose hacia arriba. A uno y otro lado, sobre la membrana tirohioidea, habrá que ligar de paso la arteria laríngea superior. Se seccionará la pared de la faringe a uno y otro lado. Previamente será conveniente efectuar una mejor anestesia por pulverización o por tópico con solución de cocaína al 10 % y por infiltración de novocaina en el espesor de la pared. Se usará el aspirador para recoger la saliva y la sangre que caen en la faringe.

De este modo se habrán seccionado las paredes de la faringe hasta llegar al extremo posterior de ambos cuernos del hueso hioides. La extirpación se continuará en la siguiente forma: (1) a una y otro lado de la línea media serán seccionados todos los músculos insertos en el borde superior del asa mayor del hueso hioides. Al hacerlo será conveniente mantenerse en contacto del hueso a fin de evitar la herida del nervio lingual o de la arteria lingual ya ligada; (2) a nivel de la línea media, por delante, se seccionarán todos los músculos que se insertan en el borde superior del hueso hioides yendo desde adelante hacia atrás; (3) se secciona por delante de la epiglotis en plena base de la lengua. Esta sección será llevada en profundidad hasta ponerse en contacto con la sección anteriormente hecha de los músculos suprahioideos. Asímismo, esta sección de la base de la lengua será llevada tanto más adelante cuanto más haya invadido el tumor; si sólo ha tomado la cara posterior de la epiglotis bastará pasar a un centímetro y medio por delante de ella; si la cara anterior de la epiglotis, su porción libre o la base de la lengua están





Figs. 14 y 15. Se continuará la sección de la faringe hacia los lados con tijeras o mejor con el bisturí eléctrico, prolongando la apertura practicada en la cara posterior de la laringe. Esta sección se lleva por uno y otro lado hasta el extremo posterior de ambos cuernos del hueso hioides.

La extirpación se continuará en la siguiente forma: 1°.—A uno y otro lado de la línea media serán seccionados todos los músculos insertos en el borde superior del asta mayor del hueso hioides. Al hacerlo, será conveniente mantenerse en contacto del hueso a fin de evitar la herida del nervio lingual o de la arteria lingual ya ligada. 2°.—A nivel de la línea media, por delante se seccionarán todos los músculos que se insertan en el borde superior, del hueso hioides yendo desde adelante hacia atrás. 3°.—Se secciona por delante de la epiglotis en plena base de la lengua. Esta sección será llevada en profundidad hasta ponerse en contacto con la sección anteriormente hecha de los músculos suprahioideos, y pasando ampliamente por delante del tumor.

tomadas por el tumor, será necesario pasar a 2 ó 3 cms. por delante de la base lingual. Se hará pues una amputación parcial de la base de la lengua (Figs. 14 y 15).

Todas estas secciones de la porción superior de la laringe, de la faringe, de los músculos suprahioideos y de la base de la lengua, se harán con el bisturí eléctrico. La sucesión de los deferentes tiempos de este momento operatorio variará de un enfermo a otro según las condiciones anatómocas. El orden estará dado por la mayor o menor facilidad con que se podrá hacer cada parte; se podrá abandonar la sección de una parte antes de terminada para dar preferencia a otra y volver en su oportunidad a retomar la primera. Lo necesario será guiarse siempre por la vista para asegurarse de que se pasa lejos de los límites del tumor y para controlar la hemorragia.

La hemostasia en esta zona será minuciosa. Se pinzarán todos los vasos del borde de la faringe, los que serán cuidadosamente ligados; se pinzarán todas las venas de la base de la lengua, que serán ligadas con puntos por transfixión. Asímismo se evitará la hemorragia de la base de la lengua por medio de dos fuertes puntos en U de catgut dispuestos transversalmente, que atraviesan la base de la lengua a cada lado de la línea media, y van desde la mucosa hasta los músculos suprahioideos (Fig. 16).

La faringe es reparada por medio de una sutura en dos planos con puntos separados en U de catgut cromado N° 00. Estos puntos en U no son perforantes, a fin de evitar la contaminación de los espacios celulares a través de la perforación y siguiendo el trayecto del catgut. Toman sólo la submucosa y la muscular de la faringe. Acostumbramos a hacer esta sutura de abajo hacia arriba. Debido a la forma particular de la pérdida de substancia faríngea la sutura vertical puede llegar hasta la lengua, de

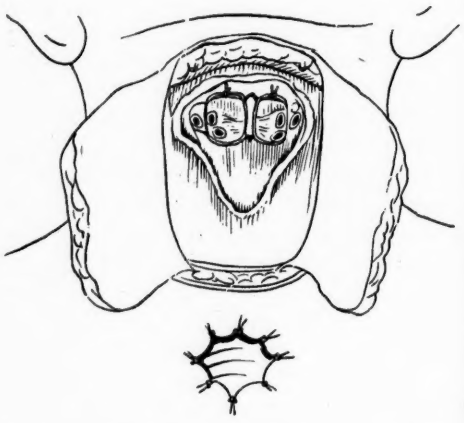


Fig. 16. Hemostasia de la base de la lengua por medio de dos fuertes puntos en U de catgut cromado que la atraviesan transversalmente a cada lado de la línea media, y que van desde la mucosa hasta los músculos supra-hioideos.

tal modo que en la parte superior debe cerrarse la brecha faríngea en sentido transversal, uniendo la pared de la faringe a la mucosa de la base de la lengua. Cuando la porción vertical de la sutura faríngea ha sido hecha, hacemos que un ayudante introduzca por una de las ventanas de la nariz el tubo de caucho para la alimentación del paciente; el cirujano guía, a través de la parte no suturada aún de la faringe, su buena colocación. Luego se cierra con minuciosidad la parte transversal de la apertura faríngea. Esta sutura es difícil por la profundidad en que es necesario trabajar, pero las mucosas lingual y faríngea resisten bien los puntos de sutura. Cubrimos esta sutura con un segundo plano, hecho igualmente con puntos en U no perforantes de catgut cromado (Fig. 17).

Cerramos la herida cutánea con puntos de afrontamiento de crin o seda. Previamente se ha taponado con gasa hemostática la loge suprahioidea y ambas goteras látero-faríngeas. Utilizamos gasa en tiras de 3 á 5 cms. de ancho cuyos cabos salen por los dos extremos de la

herida transversal superior y por la parte central de la inferior a fin de asegurar el drenaje y hacer posibles las curaciones (Fig. 18).

Una vez hecha la toilette de la herida se coloca la cánula traqueal y se cubre la herida con un apósito medianamente apretado y acolchado a fin de comprimir la zona operatoria.

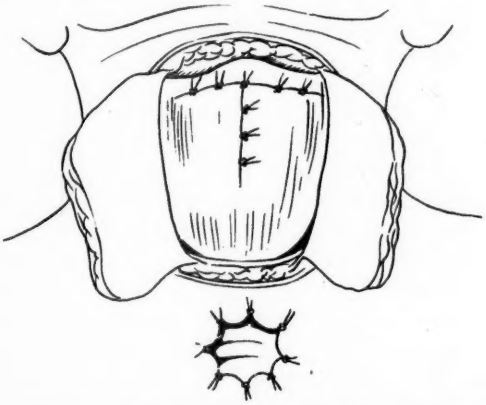


Fig. 17. El cierre de la faringe ha sido terminado. La línea de sutura reviste la forma de una T. Se efectúa un segundo plano de sutura de la faringe.

POSTOPERATORIO

No describiremos todas las minucias del postoperatorio en estos enfermos. Nos bastará decir que la curación por segunda intención es la regla; que la apertura de la sutura faríngea en extensión más o menos grande se produce casi siempre, y en consecuencia deben efectuarse las curaciones de acuerdo con esta fistulización temporaria. Los taponamientos de la herida operatoria se retiran a las 48 horas y se reemplazan por otros mucha más pequeños que sirven para mantener abiertas las partes de la herida cutánea que han sido destinadas al drenaje y para drenar las secreciones. Luego, según las condiciones del caso, se efectúan curaciones diarias o dos veces en el día; pronto reemplazamos los drenes de gasa por otros formados por pequeñas láminas de caucho acanalado cuya única función es mantener abiertos los bordes de la herida y permitir el paso de las secreciones, hasta tanto la cicatrización se haya efectuado desde la profundidad a la superficie.

En cada curación procedemos con la mayor minuciosidad a fin de favorecer la movilización de las secreciones y la

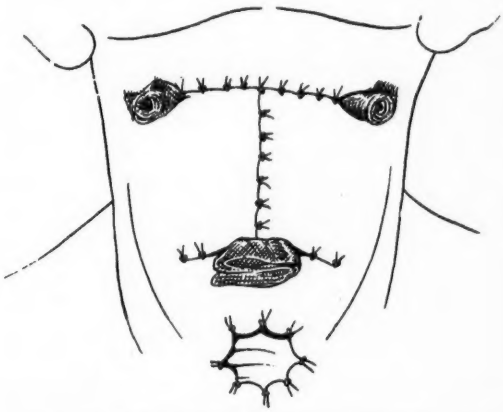


Fig. 18. Sutura de la piel. Esta sutura deja pasar por los dos extremos de la herida superior y por la parte central de la herida inferior, a nivel de la conjunción con la herida mediana vertical, en dos cabos de gasa que se han colocado en ambas goteras laterofaríngeas a fin de perfeccionar la hemostasia. Estas aperturas servirán luego para el drenaje y las curaciones.

extracción de las escaras apenas quedan desprendidas, así como a la extracción de la más pequeña cantidad de pus que pueda albergarse en cada intersticio de la amplia herida operatoria. Nos valemos para ello de largos espéculos nasales de Killian, que permiten llegar a la profundidad de la herida para hacer esta minuciosa higiene. En muchas ocasiones nos hemos valido para las curaciones de un recurso que nos ha sido precioso: la aspiración por medio de una trompa de agua, que nos permite, paseando suavemente la extremidad de la cánula por la herida aspirar y extraer en esa forma, sin el menor traumatismo, la más pequeña escara o el más pequeño depósito

de pus. Una cánula de vidrio acodada en gancho o en jota, se adapta para penetrar en todos los intersticios de la herida. Esta curación efectuada dos o más veces en el día, de acuerdo con las necesidades, favorece considerablemente la evolución de la herida y su pronta granulación. El uso de la aspiración en la forma que hemos descripto abrevia considerablemente la duración de cada curación y la hace mucho más simple, fácil y eficaz.

La apertura de la faringe debe considerarse fatal, pero la extensión en que se produce es variable según las condiciones del caso. Cuando la faringe ha sido minuciosamente suturada en dos planos, cuando la higiene bucal ha sido llevada hasta el máximo que permiten los recursos actuales, la apertura de la faringe es de escasa extensión. A ello contribuyen sobre todo los movimientos de deglución del paciente, que son inevitables. La apertura de la faringe dá origen a una fístula temporaria, que permite la salida, a través de la herida, de la saliva que se mezcla con el pus y otras secreciones provenientes de la misma.

La producción de escaras por necrosis de los músculos y de los bordes faríngeos, es frecuente. En ello interviene sobre todo la sepsis de origen bucal. Las maniobras suaves del cirujano, el cuidado minucioso de no dejar en la herida trozos de músculos o de tejido conjuntivo más o menos devitalizados por las maniobras operatorias, hacen que estas escaras sean de menor tamaño y menos numerosas. Cuando se ha operado un cáncer de la epiglotis de acuerdo con la técnica arriba descripta, es frecuente observar la caída de gruesas escaras provenientes de la base de la lengua.

El interés de la existencia de escasas zonas de necrosis reside en la mayor rapidez con que se obtiene la cicatrización cuando las necrosis son poco extensas. Puede decirse que la cicatrización está detenida mientras no se han eliminado todas las escaras. Entre tanto, la supuración será abundante. Sólo después que todos los tejidos necrosados hayan sido eliminados y que la herida se presente poco infectada, en pleno período de granulación, se iniciará su reparación. Esta cerrará por segunda intención y se hará por relleno y soldadura de los espacios subcutáneos y por aproximación de los bordes de la faringe hasta su unión. Al final, es habitual que queden pequeños trayectos irregulares por los cuales sale una pequeña cantidad de saliva y que por lo general curan solos, porque están formados por tejido de granulación. A veces sólo exigen que se active su cierre efectuando una ligera cauterización o cureteando el trayecto para provocar la aparición de brotes conjuntivos con gran vitalidad. Todo este proceso de cicatrización dura un período que varía habitualmente entre 25 y 45 días. Pero diversas circunstancias pueden retardarlo. La unión de los bordes de la piel con la mucosa faríngea puede dar origen a una *fístula orlada* que necesita, para curar, ser operada por avivamiento de sus bordes y sutura. Otras veces, se trata de un labio cutáneo invertido hacia adentro o de un trozo de tejido esfacelado que retarda la cicatrización y que exige que la herida sea avivada o cureteada.

Al lado de estas complicaciones menores, que por su escasa trascendencia deben considerarse casi como variantes en la evolución del postoperatorio normal, existen otras complicaciones de mayor cuantía. Fístulas de gran amplitud verdaderos faringostomas, en que una larga extensión de la musoca faríngea se ha unido a la piel y que exigen una minuciosa sutura en dos planos. Otras veces la apertura de la herida es grande y exige curaciones minuciosas. Es curioso ver cómo, grandes heridas que permiten ver ampliamente en su fondo la

faringe, se cierran en forma que no era de esperar, por la retracción de cicatriz.

La hemorragia constituye otra complicación de orden local que puede tener importancia. Desde este punto de vista debe distinguirse entre las operaciones de laringectomía simple y aquellas ampliadas por extirpación de la base de la lengua. Las primeras no producen nunca hemorragias postoperatorias importantes, a poco que se haya tenido un minucioso cuidado durante la operación. Las operaciones que comprenden la base de la lengua son desde este punto de vista de gravedad mucho mayor. Ningún cirujano debe emprender una operación de este tipo sino vá decidido desde el comienzo de ella a practicar la hemostasia previa por la ligadura de ambas arterias linguales en el ángulo de Beclère, es decir, antes del nacimiento de la dorsal de la lengua. De no hacerlo así, es casi seguro que en un momento cualquiera del postoperatorio, pero en especial entre el 8° y el 15° día, ha de tener hemorragias que pueden ser muy graves. La hemostasia de tipo terminal hecha en una de estas operaciones ha de verse comprometida por la caída de las escaras que pone en peligro la trombosis y la oclusión vascular. Este peligro es tanto más grave si se ha abusado del empleo del radiobisturí. En cambio la ligadura previa de la linguales hace la hemostasia mucha más segura y eficiente.

Las modalidades del postoperatorio en lo referente al estado general son las que corresponden a toda operación de grande importancia. No obstante, las precauciones que se toman en el preoperatorio, la práctica de la operación con anestesia local, hacen que el número de accidentes generales sea menor que lo que es de temer. La existencia de complicaciones pulmonares es rara debido precisamente a que se considera que la infección bronquial es una contraindicación temporaria o permanente de la operación y a que en ésta se evita la caída de pus y de sangre en el árbol aéreo. El hecho de rodear a los enfermos de una atmósfera adecuada que les evita enfriamientos, tal como se ha sistematizado en el Institudo, es otra razón de importancia.

Otras alteraciones que pueden venir del estado general son las que provienen de la alimentación del paciente, que ha de hacerse por fuerza a través de la sonda. No las hemos observado debido a la alimentación abundante y completa de que se provee a los enfermos en el Instituto.

No tomamos en cuenta en las alteraciones del estado general, el "shock" postoperatorio, porque la práctica de la operación con anestesia local y la suavidad operatoria nos permiten evitarlo. Otras alteraciones del estado general, como ser reacciones febriles, están en relación con el estado local.

POSTOPERATORIO ALEJADO Y RESULTADOS

En lo referente al postoperatorio alejado nos corresponde comentar dos puntos principales: (1) Lo referente a la restitución funcional del enfermo; (2) La duración de las curaciones obtenidas.

La restitución funcional del enfermo se obtiene en un gran número de casos. Son conocidas las mutilaciones que significan para el enfermo la pérdida de la laringe, de las cuales la pérdida de la voz es la más importante. No obstante, la mitad aproximadamente de ellos, o tal vez un número mayor, aprenden a hablar en un período medio de seis meses y ello les permite una vida de trabajo compatible con la situación social que poseen; la mayoría de ellos pueden continuar la profesión que desempeñaban antes de ser operados. Es notable la euforia y la alegría con que viven la mayoría de estos operados y el empeño con que inician el aprendizaje de la fonación y con que rein-

ician su trabajo. Chevalier Jackson ya ha hecho notar esta euforia y el alegre optimismo que acompañan a muchos de estos mutilados. En otra oportunidad nos ocuparemos con detalles de esta fonación faríngea y de su mecanismo.

En cambio hemos encontrado una gran repugnancia por parte de los enfermos al uso de los tubos o de las pipas de fonación.

En lo referente a la duración de las curaciones obtenidas, o sea los resultados de la operación, debemos considerar que ellos son incomparablemente superiores a los que proporciona la radioterapia. Es verdad que en el primer año posterior a la laringectomía se produce un alto porcentaje de recidivas; la enorme mayoría de ellas lo hacen al primer año posterior a la operación, de tal modo que puede decirse que cuando el enfermo ha pasado un año desde el momento en que ha sido operado, puede considerarse definitivamente curado. En la estadística del Instituto de Medicina Experimental publicada en 1936 que comprendía 200 laringectomías, había 109 curados y 91 recidivas o sea 45.5%.

Había asímismo 14 enfermos cuya curación databa de 5 años; 10 enfermos con 4 años de curación; 18 con 3 años; 24 con 2 años; 31 con un año y 12 con seis meses. En la actualidad puede elevarse el número de laringectomías a 254 de las cuales 112 han recidivado, la mayoría de ellas en el primer año. Diez han fallecido en el segundo año de la operación y siete en el tercer año.

En la actualidad (abril de 1941) se cuentan en el Instituto de Medicina Experimental 258 operados de laringectomía desde el año 1927 hasta la fecha. No nos ha sido posible puntualizar la estadística del Instituto anterior a 1927.

Las operaciones se han distribuído en los últimos años en la siguiente forma:

1931	18	laringectomías
1932	12	"
1933	31	"
1934	33	"
1935	24	"
1936	17	"
1937	23	"
1938	15	"
1939	25	"
1940	24	"

Los 27 últimos casos han sido operados personalmente por uno de nosotros.

La revisión de los enfermos curados, revisión forzosamente incompleta por la dificultad que hay de adquirir noticias de los enfermos o de hacerlos concurrir al Instituto, nos ha hecho observar los siguientes resultados que son cifras incompletas pero positivas. Nos consta la curación obtenida en la siguiente forma:

1	enfermo	con	14	años	de curación
2	"	"	11	"	" "
1	"	"	9	"	" "
1	"	"	8	"	" "
2	"	"	7	"	" "
1	"	"	6	"	" "
14	"	"	5	"	" "
12	"	"	4	"	" "
18	"	"	3	"	" "
24	"	"	2	"	" "
35	"	"	1	"	" "
15	"	están todavía libres de recidiva en el curso de su primer año de postoperatorio.			

El número total de recidivas observados se elevó a 105, casi todas ellas aparecidas en el primer año del postoperatorio. Diez enfermos fallecieron de recidiva en el segundo año del postoperatorio y 7 en el tercer año.

BIBLIOGRAFIA

1. Susini, M., Laringectomía con anestesia local, Soc. de Cirugía de Bs. As., Junio 25, Bolet. y Trab., 1:104, 1914
2. Copello, O., Dos casos de laringectomía por cáncer laríngeo, it., Sep. 26, Bol. y Trab., 3:144, 1919
3. Jorge, J. M., Cáncer de la laringe, it., Sept. 26, it., 3:145, 1919
4. Viale, I., Resultado alejado de una laringectomía 15 años después de la operación., Mayo 17, Bolet. y Trab., 6:179, 1922

5. Bolo, P., it., Mayo 17, it., 6:180, 1922
6. Bisi, R. A., Cáncer laríngeo Tesis de Buenos Aires, 1938
7. Foderl, O., 242 Tecnick der Laryng-Extirpation. Archif. klin. Chir., 58:803, 1899
8. Gussio, S., Nuovo processo di laringectomio totales. Sthena. Toma, Nov., pag. 455, 1939
9. Portmann, A propos d'un procedé nouveau de laringectomie totale. Bull. et Mém. Soc. Méd. et Chir. Bordeaux, 1921-1922
10. Portmann, G., y Despons, J., Une novelle technique de laryngectomie totale, Revue Laryngo-Oto-Rhin., No. 2, Febr. 1937
11. Laclau—Lacrouts, Considérations sur les indications et la technique de la laryngectomie totale, Revue de Laryngol., 59:914, 1938.
12. Portmann, G., La laringectomie totale en trois temps. Opération de securitée. La Presse Médicale, pág. 7-10, Agosto 1940
13. Milhade, A des autoplasties oesophagiennes consecutives a l'ablation du larynge. These de Bordeaux, 1921-1922
14. Serger, P., Considérations sur les diferentes techniques de la laryngectomie. Revue de Laryngol., 49, N° 3-15, 67, 1928
15. New, G. B., A two stage laryngectomie, Surgery, Gynec. and Obst., 47:826, 1928
16. Molinié, J., Les tumeurs malignes du Larynx. Ed. Maloine, Paris 1907
17. Babcock, W. W., Laryngectomy for carcinoma of the larynx. Surg. Clinics N. America, 11:1207, 1931.
18. Memoria del Instituto de Medicina Experimental, 1936 (pág. 26 y sig.), id. pág. 139 y sig.
19. Memoria del Instituto de Medicina Experimental 1937-1939, pág. 169 y sig.
20. Roffo, A. H. y Del Giudice, V., Radioterapia del carcinoma de la laringe. Relación clínica sobre 110 enfermos tratados en el Instituto de Medicina Experimental. Bol. Inst. Med. Experimental, 16:N° 52, pág. 79 á 98, 1939

SUMARIO

En el tratamiento de los enfermos con cáncer de la laringe que concurren al Instituto de Medicina Experimental, seguimos un plan perfectamente standarizado, que puede resumirse en la siguiente forma: 1. Examen clínico y laringoscópico del enfermo, 2. Análisis clínicos y biológicos, y 3. Biopsia de la lesión.

Solo despues de haber establecido por la biopsia la naturaleza histológica de la lesión se procede a efectuar el tratamiento. Todas estas investigaciones clínicas solo requieren, de acuerdo con la práctica generalizada en el Instituto, un plazo de 48 horas, de modo que a los dos días de haber concurrido el enfermo por primera vez, ya se está en posesión de la prueba histológica que permitirá hacer el plan de tratamiento sobre una base firme.

Los enfermos con cáncer de laringe que concurren al Instituto reciben un tratamiento de acuerdo con la indicación que se desprende de la evolución de su tumor y de su estado general. De acuerdo con esto estos enfermos se dividen en tres grupos:

1. Los que son tratados quirúrgicamente

2. Los tratados por radioterapia

3. Los que reciben un tratamiento paliativo.

En esta comunicación, y dada la índole especializada de este Congreso, nos ocuparemos tan solo del tratamiento quirúrgico del cáncer de la laringe, tal como se efectúa en este Instituto.

Tratamiento quirúrgico radical consiste en la laringectomía, que consideramos de elección, siempre que pueda efectuarse en buenas condiciones y que no existan contraindicaciones locales ni generales.

Se consideran operables:

1. Todos los cánceres intralaríngeos. Se considera que el cáncer intralaríngeo, encapsulado en el estuche cartilaginoso que le forma la laringe, constituye el caso ideal que se presta en mejores condiciones a un tratamiento quirúrgico eficaz.

2. Los cánceres de laringe que a pesar de haber invadido una de las regiones vecinas (base de la lengua, faringe, esófago) son completamente extirpables, porque esta invasión es de limitadas proporciones.

3. La existencia de adenopatía es una contraindicación a la operación porque evidencia que el tumor ha salido de su estuche laríngeo y ha invadido los espacios celulares del cuello.

4. En general, se considera que solo pueden ser pasibles de la operación los enfermos que no ofrecen contraindicaciones generales debido a su edad avanzada, a extrema debilidad orgánica, a enfermedades asociadas como diabetes, nefroesclerosis, miocarditis, o a taras orgánicas de otro orden.

Tratamiento roentgenterápico se aplica a los casos en que no es posible aplicar el tratamiento quirurgico, sea porque el enfermo se niega a someterse a la

laringectomía, sea porque existen las contraindicaciones de orden local o general de que se ha hablado en el apartado anterior.

El tratamiento paliativo está destinado á los enfermos en que todo propósito de tratamiento curativo debe ser abandonado. Consiste en la traqueotomía que se combina en un crecido número de casos con la radioterapia.

La laringenctomía se efectúa en el Instituto de acuerdo con la siguiente técnica:

Una vez establecidas las condiciones del enfermo en cuanto a su equilibrio clínico y humoral, y en cuanto a su capacidad para resistir una operación grave que va seguida de un postoperatorio cargado de peligros; se procede a la perfecta aseptización bucal y a la eliminación de otros focos sépticos.

Incisión en H horizontal. Ligadura de ambas arterias linguales Extirpación de la laringe de abajo hacia arriba, de acuerdo con la técnica de Moure-Perier. Abocamiento de la tráquea a un orificio cutáneo a nivel de la horquilla esternal. La liberación de la laringe de sus vinculaciones superiores se hace con radiobisturí bajo el control de la vista y pasando lejos de sus límites. La mayoría de las veces, sobre todo cuando se trata de un cáncer de la epiglotis o que la ha invadido, se extirpa el hueso hioides y la base de la lengua.

Plástica de la faringe en dos planos. Sutura de la herida dejando las aperturas necesarias para el drenaje y las curaciones. La operación se efectúa siempre con anestesia local.

En lo referente a los resultados alejados de la operación, deba considerarse que ellos son incomparablemente superiores a los que proporciona la roentgenterapia.

Es verdad que en el primer año posterior a la operación se produce un alto porcentaje de recidivas, de tal modo que puede decirse que cuando el enfermo ha pasado un año desde el momento de la operación sin recidivar, puede considerarse definitivamente curado.

En la estadística del Instituto de Medicina Experimental publicada en el año 1936, que comprendía 200 laringectomías, había 109 curados y 91 recidivas.

En la actualidad, Abril de 1941, se cuentan en el Instituto 258 operados desde el año 1927 hasta le fecha.

Las operaciones efectuadas en este Instituto desde el año 1931-1940 por los Dres. Cetia, Del Sel y Ferrari se distribuyen en la siguiente forma:

Años	1931	1932	1933	1934	1935
Laringectomías	18	12	31	33	34
Años	1936	1937	1938	1939	1940
Laringectomías	17	23	15	25	24

La revisión de los enfermos curados, revisión forsozamente incompleta por la dificultad con que se puede obtener noticias de ciertos enfermos o de hacerlos concurrir al Instituto, nos ha hecho observar los siguientes resultados: consta la curación obtenida en la siguiente forma: 1 enfermo con 14 años de curación, 0,90%; 2 con 11 años, 1,80%; 1 con 9 años, 0,90%; 1 con 8 años, 0,90%; dos con 7 años, 1,80%; 1 con 6 años, 0,90; 14 con 5 años, 12,61%; 12 con 4 años, 10,81%; 18 con 3 años, 16,21%; 24 con 2 años, 21,62%; 35 con 1 año, 31,53%.

Tratamiento Roentgenterápico se aplica a los casos en que no es posible aplicar el tratamiento quirurgico, sea porque el enfermo se niega a someterse a la laringectomía, sea porque existen las contraindicaciones de orden local o general de que se ha hablado en el apartado anterior.

Quince están libres de recidivas en el curso del primer año del postoperatorio. El número de recidivas observadas en el primer año de operado el enfermo se elevó a los 105 sobre 258 operados. Diez

enfermos fallecieron re recidiva en el segundo año del postoperatorio y 7 en el tercero.

Por todos estos hechos es que consideramos que el tratamiento de elección del cáncer laríngeo es el quirúrgico, cuando el enfermo está en las condiciones que se han detallado más arriba.

RÉSUMÉ

Dans l'Institut de Medecine Experimentale nous suivons un traitement parfaitement réglé:

1. Examen clinique et laryngoscopique.
2. Analyses cliniques et biologiques.
3. Biopsie.

Le traitement est fait seulement après la biopsie. Toute la routine prend 48 heures. Les malades sont divisés en trois groupes:

1. Traitement chirurgical.
2. Radiotherapie.
3. Traitement palliatif.

Dans cette communication nous nous occuperons seulement du traitement chirurgical.

I. Traitement Chirurgical Radical. Procedé d'élection, quand possible. Nous opérons:

1. Les cancers intralaryngiens, ou la lésion est séparée du voisinage par l'étui cartilagineux.

2. Les cancers a invasion limitée du voisinage.

3. La prise des ganglions est une contraindication, decelant la prise des espaces celluleux du cou.

4. Sont paissibles de l'opération seulement les malades sans tare organique averée.

II. Radiotherapie. Est faite lorsqu'il n'est pas possible d' opérer, a cause de contraindications ou du réfus du malade.

III. Traitemente Palliatif. Est fait losque rien d'autre n'est possible. Il consiste en trachéotomie, souvent avec radiotherapie.

Laryngectomie. Apres pose des indications, nous procedons a aseptiser la bouche et supprimer tout autre foyer septique.

Technique. Incision en "H." Ligature des linguales. Extirpation du larynx de bas en haut, d'apres la technique de Moure et Perier. Abouchement de la trachée au niveau de la fourche sternale. La libération du larinx en haut se fait au couteau électrique, loin du larynx. Souvent l'hyoíde et la base de la langue sont extirpés.

Refaction du pharynx en deux plans. Clôture de la plaie en laissant des orifices pour drainage et pansements.

L'operation est fait sous anesthesie locale.

Resultats. Bien superieurs a ceux de la radiotherapie. Au cours de la première année il y a beaucoup de récidives mais après on peut considerer le malade comme guéri.

Dans nôtre statistique, publiée en 1936 nous avons présenté 200 cas, avec 109 guérisons et 91 récidives.

Aujour d'hui, avril 1941, nous avons 258 cas. Les renseignements que nous avons pu obtenir, necessairement incomplets, nous donnent:

Années de guérison	*Nombre de cas*	*%*
14	1	0,9
11	2	1,8
9	1	0,9
8	1	0,9
7	2	1,8
6	1	0,9
5	14	12,6
4	12	10,81
3	18	16,21
2	24	21,62
1	35	31,53

Dr. Fred H. Albee's Odyssey

On the evening of September 7, 1942, according to planned itinerary, Dr. Fred H. Albee, International President of the College, returned safe and contented to the United States, arriving at the Miami airport, after an extensive flying trip to South America. The trip had been a taxing one, though also most successful and delightful. He feels that this trip to the South American countries welded better understanding within the profession in these northern and southern hemispheres.

The first overnight stop was on August 10, at Port-of-Spain, Trinidad, B.W.I. Dr. Albee remained there for two nights, attending two banquets in his honor, taking advantage of the opportunity to set forth the ideals of the International College of Surgeons which met with a hearty response.

On entering Brazil, at Belem, Dr. Albee was met by the Minister of Education of the State of Para, who informed him that he was to be the guest of the Brazilian Government during his stay. Amenities were exchanged. Dr. Albee's arrival in Brazil was timed for a dramatic moment in that country's history, for it coincided with the sinking of three Brazilian steamers by the "outlaw Nazis," with war declared the following day. Dr. Albee was able to witness many demonstrations all over the city of Rio de Janeiro, including the tearing down of German and Italian signs from storefronts. Most exciting was the tearing down and burning of the Swastika flag before the Grand Opera House. At a dinner in his honor, Dr. Albee discussed matters of national importance with Mr. Oswaldo Aranha. One of the interesting features of this dinner given by Mr. Aranha was the presentation of a medal and scroll to Dr. Albee by the President of the University of Brazil, who formally notified him that he had been made Honorary Professor of Surgery at that university.

While in Rio de Janeiro, Dr. Albee was requested to operate and demonstrate the features of his original work in bone-graft surgery. One of the patients was the unfortunate Consul General from Bolivia who was in Rio de Janeiro en route by slow stages, via Africa from Japan, where he had been in diplomatic service. He was on an extension frame and suffering from severe tuberculosis of the spine which caused a complete paralysis of his lower extremities and great pain. The case was urgent and demanded immediate attention. With the assistance of one of Dr. Albee's former students and a Fellow of his Clinics, Dr. Jose Londres of Rio de Janeiro, a bone-graft operation was done, transplanting bone from the tibia into the diseased vertebrae of the spinal column.

During Dr. Albee's stay in Rio de Janeiro a very enthusiastic meeting of the Brazilian Chapter of the International College of Surgeons was held at which he presided. In Brazil real progress is evident toward a brilliant future for the Chapter.

Owing to the heightened interest at the present time in all things pertaining to the United States, Dr. Albee's trip to Argentina was more effective than in any one of the other South American countries. Everyone seemed to be so anxious to inform him that at least 90 per cent of the population were in favor of the United States and the United Nations, some going so far as to say that if the present Argentine Government were not most careful it might be overthrown.

In Buenos Aires, Dr. Albee was the guest of the University of Buenos Aires, having sojourned there at the special invitation of both the Dean and the Chief of the Department of Surgery of the University, to be present at the dedication of the operating room which was to be named for him, as exemplified by the unveiling of the bronze tablet commemorating the occasion. An American flag was used for this unveiling and Dr. Albee was accorded the privilege of dedicating this room by being the first surgeon to operate in it. At this time he was also presented with a medal and a beautiful leather album of photographs, clippings, etc.

A large meeting with luncheon was tendered Dr. Albee by the Argentine Chapter of the International College of Surgeons and Professor Alejandro Ceballos, President of the Argentine Chapter of the College, gave an eloquent address which was enthusiastically received by the large number attending the luncheon.

While in Argentina, Dr. Albee was the guest also of Mr. Alfredo Harrington at his ranch. Entertainment included a rodeo with a demonstration of wild horses and skilled riding. It was also interesting to learn that corn sells for one-half cent per bushel on the

Pampas, and that it is used there for cattle feed and fuel.

A last minute change was necessary in the itinerary, owing to a cordial invitation received from Professor Allende of the University of Cordoba, Argentina. Dr. Albee found Professor Allende to be very interested in the progress of the International College of Surgeons. Although the stop-over in Cordoba was but a short one, it was most enjoyable and he feels it has done much to further good will toward the College.

The trip from Buenos Aires to Santiago, Chile, was one of the stormiest of the extensive airplane journeys. There was a raging gale over the Andes, and the Douglas plane in which he was travelling seemed but a feather in the wind, frequently dropping several hundred feet at a time, causing much anxiety among the passengers. According to plan, Dr. Albee delivered a lecture at the University of Chile where, for some years, he has been Honorary Professor of Surgery.

In Peru, Dr. Albee was tendered an outstanding reception. Professor Francisco Graña, the President of the Peruvian Chapter of the International College of Surgeons and Chief of the Obrero Hospital in Lima, met Dr. Albee at the airport, and arose at four o'clock in the morning to see him off and wish him "Bon Voyage" on his departure. Professor Graña is a splendid man and popular with the profession and laity. The new Obrero Hospital, only six months old, is the last word in hospital construction and nursing care.

While in Lima, Dr. Albee lectured at the University of San Marco, renowned as the oldest University in the Western hemisphere, and where he has been Honorary Professor of Surgery for some years.

The last stop was Panama, where he was a guest at the Presidential Palace. President Ricardo de la Guardia was a patient of Dr. Albee's about twelve years ago, and while in Panama Dr. Albee operated on one of President de la Guardia's personal friends.

One of the most interesting features of this visit was an automobile ride over the new highway across the Isthmus which Dr. Augusto Boyd, ex-President and brother-in-law of President de la Guardia, states is to be named the Boyd-Roosevelt highway because its construction was arranged during Dr. Boyd's Presidency.

Dr. Boyd is the head of the Panamanian Chapter of the International College of Surgeons and is much interested in the welfare of the College, and in the activities of the Panamanian Chapter.

In reviewing the accomplishments of this trip it is felt that it has been most successful, the "Ambassador in White" having promoted good-will in the profession as well as in other walks of life. It would seem to have been the psychologic time to further better understanding between the Latin American countries and our United States. Much was accomplished in stimulating growth of the various chapters of the International College of Surgeons in their formative period at this time.

From the Constitution of the

INTERNATIONAL COLLEGE OF SURGEONS

For information concerning membership in the International College of Surgeons, write to Mr. Ralph Osborne, Business Secretary, International College of Surgeons, 1512 Spruce Street, Philadelphia.

"The International College of Surgeons is a purely scientific organization incorporated not for profit, and solely for the advancement of the Art and Science of Surgery in all its branches.

"It is strictly non-sectarian and non-political. It is decidedly against Arbitrary Restriction of Merit and is free from prejudice. It will recognize the Surgeon and his accomplishments, and will not be influenced by his financial, political or other irrelevant status."

IN MEMORIAM

DR. GUSTAV KOLISCHER

IN the death of Dr. Gustav Kolischer, which took place on August 11, 1942, the medical profession lost an outstanding figure, especially in the field of modern urology.

A native of Austria, Dr. Kolischer obtained his classical and medical education in the capital of that country and was graduated with high honors from the medical faculty of the University of Vienna in 1886, at the age of twenty-three. He satisfied the exactions of the government by serving a year as a junior medical officer in the army and then entered private practice. At that time he was especially interested in the comparatively new method of cystoscopy in which he became proficient.

Married to the daughter of the famous otologist, Professor Gruber, temperamental differences which were not overcome even after the birth of two daughters, resulted in separation and his emigration to Chicago after fourteen years of practice in Vienna. He at once became known as a skillful urologist, though he did not strictly limit himself to that specialty. His practice extended to the fields of operative gynecology and obstetrics, in which latter specialty he employed the European method of teaching groups of practitioners. Later he was also professor of Urology in the Chicago Post-Graduate Medical School. An aggressive debater he was often heard in medical societies, specialistic as well as general and not a few men who presented allegedly original contributions were publicly exposed by his naming of the true originators. Possessed of an uncanny memory, he never looked at his manuscripts when presenting a paper, and his discussants, who were provided with advance copies, often marveled at his ability to repeat word for word what he had dictated to his stenographer. This uncanny memory served him well also in citing literary references.

A member of the American Urological Association and of the Chicago Urological Society, of which later he became president, he extended his interest also to the field of physical therapy and electrosurgery. He did considerable work with diathermy in the management of bladder tumors, benign as well as malignant. In spite of an extensive practice, he not only found time to prepare many papers, but also a masterly translation into German of Clarence Webster's "Human Placentation," which appeared in Berlin in 1906, clearly showing his continued interest in obstetric pathology. Among his many notable achievements was his introduction to American uroradiology of the shadowgraph catheter. He also was the first to organize urologic departments in Michael Reese Hospital and shortly after that was called to Mt. Sinai Hospital to organize a like department.

His interest in physical therapy and electrosurgery caused him to join the American Congress of Physical Therapy, which organization raised him to the presidency, and, on the creation of its gold key merit as an award for outstanding services to science, named him as one of the first in a group of seven internationally famous men of various sciences.

DR. GUSTAV KOLISCHER

In life a rather impractical man, he never cared for wealth, yet, was a *bon vivant,* and became associated with prominent Americans, as in fact he himself became so thoroughly American that events abroad touched him only lightly in contrast to many others who retained an intense interest in their native lands.

Though his friends were legion, he had few intimates, but to these his loyalty and frankness were limitless. He despised pretenders and expressed contempt for men who remained ignorant, even though they attained office in the organized profession. He continued to labor up to a few days before the effects of pneumonia laid him low in his seventy-ninth year. His memory will live long among all who knew him or his work. (Alfred E. Jones in *Archives of Physical Therapy,* September, 1942.)

Convocation of Mexican Chapter of the International College of Surgeons

A meeting and commencement exercises of the Mexican Chapter of the International College of Surgeons were held in the main amphitheatre of the Faculty of Medical and Biological Sciences of the National University of Mexico on the 20th day of August, 1942. Dr. Victor Fernandez Manero, Chief of the Department of Public Health, presided. He also represented on this occasion His Excellency Don Manuel Avila Comacho, President of the Republic of Mexico.

Dr. Manero was accompanied by Lic. Alfonso Noriega, Secretary General of the University in representing the Rector of the National University, and Dr. Gustavo Argil, Head of the University. Dr. Gonzalo Castañeda, President of the Mexican Chapter, Drs. Baudelio Villanueva, Darío Fernández, and Francisco Fonseca García.

Dr. Gustavo Argil, Director of the Faculty of Medical and Biological Sciences of the National University of Mexico, opened the meeting with the following message of greeting:

"Honorable Victor Fernandez Manero, Personal Representative of His Excellency, the President of the Republic:

"It is of special satisfaction to us to welcome you to our Medical School. Almost 30 years after the fall of our magnificent Cuauhtemoc that Antonio Mendoza, then Viceroy of New Spain, in the year 1551, issued a royal decree founding the University of Mexico. Two years later, on the 25th day of January, 1553, the oldest university in America opened its doors in the home of dona Catalina de Moncada, which was then situated on the corner of the now known streets of Seminario and Moneda. This antiquity of almost four centuries carries with it a grandiose tradition for our University, and of which we are most proud.

"In the year 1578, the University inaugurated the teaching of medicine, but it was not until the last century, in 1833, that through a decree by Dr. Valentin Gomez Farias, our School of Medicine was organized on modern scientific bases. From that day on, the mission of our school has been to produce physicians who, by practicing through the confines of the republic and in foreign countries, are fulfilling

National University of Mexico

their noble missions, and many of them have so distinguished themselves that they have brought glory to Mexican medicine.

"This has not been the only meritorious work undertaken by this venerable school, for in fulfillment of its ideals of alma mater—the diffusion of medical culture—it has sheltered under its portals the major part of the nation's scientific organizations dedicated to the promotion of medical progress.

"The National Academy of Medicine, The Mexican Academy of Surgery, The Mexican Society of Internal Medicine, The Mexican Society of Pediatrics, and many others are the medium for the diffusion of knowledge by our school. At present the School of Medicine furnishes the occasion for the International College of Surgeons to develop one of its cultural aims. This young organization has already demonstrated its ideals of study and progress in the surgical field; it has received the aid of the president of our nation, who is a Fellow Honoris Causa; like many other members of our faculty. Because of all these reasons the Medical School has confidence in its success.

"In the name of our Faculty of the National University of Mexico, I welcome you, Mr. Representative of the Citizen President of the Republic."

The following commencement oration was delivered by Dr. Gonzalo Castañeda, President of the Mexican Chapter:

"Fellow representative of His Excellency, the President of the Republic, Fellow Members of the College, Distinguished Audience:

"Philosophy which seeks the cause of things has so far failed to unify the thoughts of men; religion which unites the spirit of man with the Divine Creator has also failed to bind the hearts of men in true neighborly love. The laws of ethics, the sermons on morals, and the fear of chastisement or the actual force of punishment have also failed to bring forth the good in man; humanity still lives in a state of turmoil because of conflicting 'isms,' dispersed and dismembered by ideas, by passion and by greed. Only the magic of science can fuse the human genus because it is symbolic of truth, and because truth is universal and eternal.

"Medicine, of all the sciences, dwells upon the secrets of life. To her there are no racial privileges or inviolate confessions, to her only death and pain exist; these two realities bring equality to all earthly creatures.

"Some visionary surgeons met in Geneva, Switzerland, to translate into action the ideal of brotherhood in knowledge; and under the aphorism that science knows no country, founded the International College of Surgeons, and true to their ideals of international equality encouraged the creation of the Mexican Chapter.

"The Mexican members of the International College of Surgeons do not claim to have reached the highest planes of wisdom, for the most part they are men consecrated to learning, conscious of their civic responsibilities and affiliated with the Mexican cultural and welfare movements. They are stimulated by their desire to succeed and are alive to the idea of making science popular, for the Mexican Chapter was founded to labor for the good of the country. The Mexican Chapter, although still in its infancy, gains daily fresh inspiration and vigor through the mental stimulus of its new members. It points with pride to have been chosen the seat of an International Scientific assembly of the College and to have been honored by the Honorable President of the Republic, General Manuel Avila Comacho, in accepting an honorary fellowship in the College. His acceptance of this fellowship is significant, in that it symbolizes that the State is very sympathetic to the aims of the College and to the importance not only to develop a people of physical powers, but higher achievement of learning.

Dr. Gustavo Argil, Director, Faculty of Medicine, National University of Mexico.

"At present the Republic is the seat of intense medical activities, a sign of civilization which augurs a promising future. The number of scientific academies, societies, assemblies and medical congresses are rapidly multiplying. They represent a renaissance symbolic of a better life. This meeting, in addition, has the satisfying pleasure of inducting new members into the Mexican Chapter of the College. We welcome them with the hope that their future activities will measure up correspondingly to their past meritorious and sincere labor. You have been more fortunate than your predecessors, for you are to receive today your diplomas from the hands of the Honorable Representative of the President of the Republic, instead of from your humble Regent, as has been the custom in the past.

"The word 'fellow' in the English language symbolizes companionship, brotherhood and friendship. As a Fellow, allow me, Mr. Representative of the President of the Republic, to call with emotion His Excellency, my companion, brother and friend.

"I wish that the International College of Surgeons had reached the renown and prestige of the Institute of France so that, like Napoleon Bonaparte, who appended in his decrees the title of Member of the Institute of France, His Excellency, the President of the Republic of Mexico, on similar occasions would be able to append his degree of Fellow Honoris Causa as an honor conferred on him symbolic of his protectorship of the culture of Mexico.

"The personality of His Excellency was once questioned and even repudiated, but today he has overcome all opposition and even conquered public opinion. His government is strong because it is just, humane and comprehending, and it governs on the predicate that the sun of Mexico is for all, be it wealthy or poor.

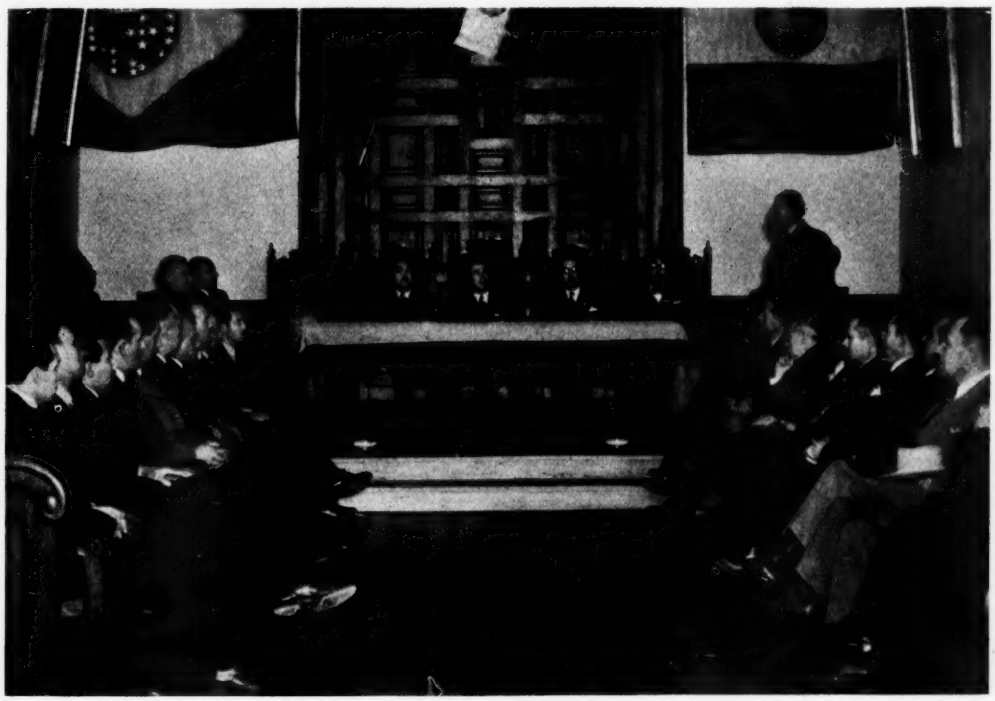
"The powers that His Excellency exercises are temporal and transitory, for they have been mandated to him by the people, and while some day he must relinquish these powers back to the people, he will always keep with him those things which he has properly merited, such as his chevrons and eagles earned during his military career and throughout his life as a patriot; likewise he shall always be able to cloak himself in the toga of a 'Fellow.'

"The presence of His Excellency on this occasion through your personal representation is an honor to the Mexican Chapter of the College, for your presence is a stimulus to us all. Since your activities of State cannot be dislocated, you are here also while governing, for the sanction and stimulation of cultural activities for the benefit of the country is part of governing."

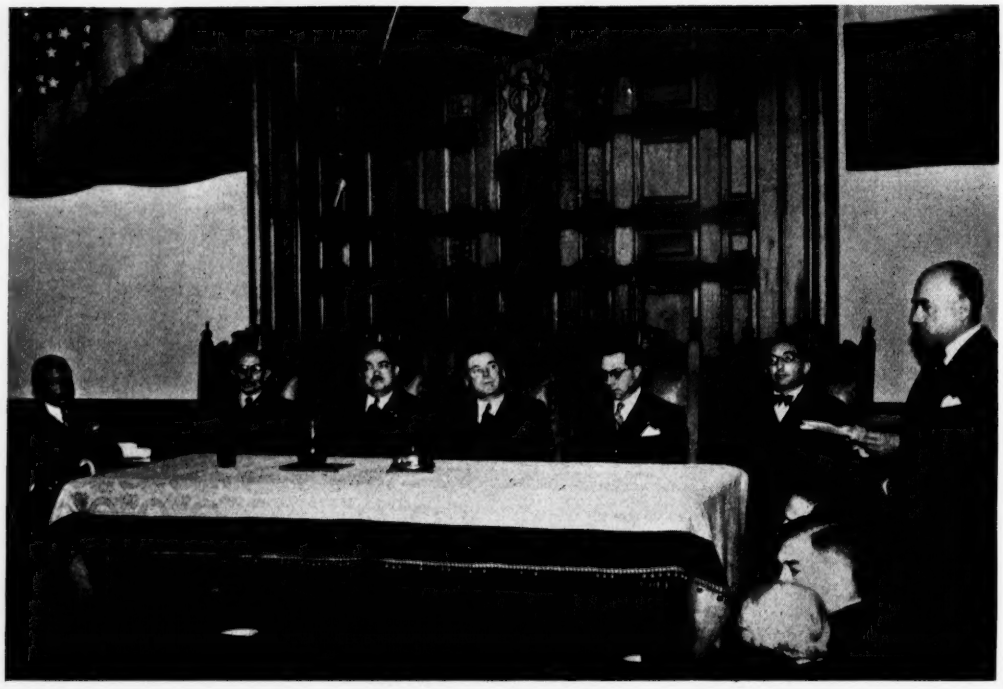
Dr. Mario Quiñones H. delivered the following address:

"Esteemed Chief of the Department of Health, Representative of His Excellency, the President of the Republic, and Fellow Honoris Causa of the College, President of the Mexican Chapter of the College, Gentlemen and Fellows:

"The Mexican surgeons who were accepted as Fellows, Members and Associates of the International



Dr. Gonzalo Castañeda, President of the Mexican Chapter, delivering his official address at the Convocation of the Mexican Chapter of the International College of Surgeons in the auditorium of the Faculty of Medicine in Mexico City.



Dr. Víctor Fernández Manero, Chief of the Department of Public Health, representing the President of the Republic at the Convocation of the Mexican Chapter of the International College of Surgeons. From left to right: Dr. Francisco Fonseca García, Secretary; Dr. Gonzalo Castañeda, President; Lic. Alfonso Noriega, Jr., Secretary-General of the University of Mexico, representing the Rector of the University; Dr. Víctor Fernández Manero, representing His Excellency, the President of the Mexican Republic; Dr. Gustavo Argil, Director of the Faculty of Medicine; Dr. Manual A. Manzanilla, Vice-President of the International College of Surgeons; Dr. Mario Quiñones, Secretary-General of the Department of Public Health of Mexico, delivering his address.

College of Surgeons in the general assembly that took place in August of last year in this capital, and who have been fortunate to receive their corresponding diplomas from the hands of the Honorable Representative of the highest dignitary of the Nation, cannot conceal the emotion that engulfed us when we consider the honor that has been bestowed upon us.

"Humble workers in the fields of the medical sciences, a happy circumstance that brings us closer to the knowledge of human nature, and that permits us to learn of its weaknesses and tribulations and, at the same time, gives us an opportunity to attempt to remedy their ills even though at times unsuccessfully; it is pleasing to us that in the bosom of an association of the prestige of the International College of Surgeons that recognition is given to our humble surgical efforts, and its portals open wide to us to permit our ingress.

"This event should fill us with pride as we comprehend the merits that caused us to become members of this famous association, whose motto is the aphorism of the immortal Pasteur. This is the result of the prosecution of the noble aims upon which it is based, namely, the promotion of the arts and science of surgery and of establishing a close interrelationship amongst those who honestly practice it in all the countries of the world.

"The honor which has been conferred upon us and of which we are very grateful, comforts and stimulates us and, at the same time, imposes upon us obligations and duties to fulfill.

"You may be assured that our efforts will be redoubled in every sense so that we may fulfill by all our means the high aims of the association. We shall work honestly and intensely, we shall make better observations of the sick, we shall improve our technics, and within our capabilities and facilities we shall promote research. Possibly in this way we may make ourselves worthy of the honor conferred upon us and in cooperation with the other members of the Mexican

Chapter of the International College of Surgeons we shall succeed in adding a grain of sand in the advancement of the arts and sciences of surgery for the lustre of the International College of Surgeons and to the scientific prestige of our beloved country.''

Dr. Fernandez Manero then conferred in the name of President Camacho the following diplomas: *Fellows*: Abelardo Monges López, Julián González Méndez, Mario Quiñones, Raúl Arturo Chavira, Conrado Zuckermann, Manuel Guadarrama, Francisco J. Campos, Francisco Cid Fierro, Manuel Márquez, Serafín Mercado Monroy, Antonio Sordo Noriega, José J. Rojo, Luis Martín Gromaz, Alejandro Otero Fernández, Bernardo J. Gastélum, Leopoldo Gómez Jáuregui, José J. Martínez, Serapio Muraira, Manuel Canseco Landero, Pompeyo Cravioto; *Members*: Enrique Flores Espinosa, Mario Vergara Soto, Manuel Castañeda Uribe, Antonio de la Maza, Jesùs N. Noyola, Salvador de Lara, Manuel Araiza Noyola, Benjamin González, Virgilio Remos San Miguel, Héctor Ramírez de Arellano, Ignacio Cadena, Fernando Alonso Ostolaza; *Associates*: Raúl Dávila G., Mario Héctor Chavira, Gaspar de la Garza Saldívar.

Representatives of His Excellency, the President of the Republic of Mexico, following the Convocation, accompanied by members of the Faculty of the University and Fellows of the College, as well as a group of eminent surgeons—Members of the Mexican Chapter of the College.

Conferring of Honorary Degree Upon the President of the Mexican Republic

The diploma of *Fellow Honoris Causa* and medallion of the International College of Surgeons was conferred upon General Manuel Avila Camacho, Constitutional President of the Republic of Mexico, by Dr. Manuel A. Manzanilla, Vice-President of the College, at the Presidential residence in Los Pinos, Mexico, D.F., the 5th day of August, 1942, at 5 P.M. The affair took place in an atmosphere of dignified simplicity. The following participated: His Excellency, The President of the Republic of Mexico, General Manuel Avila Camacho; the First Lady of the Country, Mrs. Soledad O. de Avila Camacho; Dr. Manuel A. Manzanilla, Vice-President of the International College of Surgeons, and his wife, Mrs. Gloria S. de Manzanilla; Dr. Víctor Fernández Manero, Chief of the Department of Public Health; Dr. Gonzalo Castañeda, President of the Mexican Chapter of the International College of Surgeons, and his wife, Mrs. María Luisa O. de Castañeda; Dr. Darío Fernández Fierro, Vice-President of the Mexican Chapter of the College; Dr. Miguel López Esnaurrízar, National Regent of the Mexican Chapter of the College; Dr. Francisco Fonseca García, Secretary of the Mexican Chapter of the College; Dr. Gustavo Argil, Director of the Faculty of Medicine of the University of Mexico, and Dr. Mario Quiñones H., Secretary General of the Department of Public Health of Mexico.

The presentation address of Dr. Manzanilla follows:

"Mr. President:

"The International College of Surgeons, by unanimous vote of its International Executive Committee, has conferred upon you the Academic Degree of Fellow Honoris Causa, the highest of the College.

"Your generous interest, as a statesman, in the progress of science and art is well known internationally. A year ago Mexico held in its Capital, the Third International Assembly of the International College of Surgeons, under your Honorary Presidency. This was one of the significant manifestations of your great interest, since the object of the Assembly was the progress of surgery which, in itself, constitutes art and science, as so aptly expressed by Bottini: 'If surgery is divine there is nothing more difficult than serving divinity. It is not sufficient to love mankind; it is necessary to love it passionately, not half heartedly or astutely, but stripped of all sham and subterfuge, and with a serene, silent devotion akin to the love an ascetic has for his brother, whose only aim is to aid and to serve.'

"The International College of Surgeons is a scientific institution dedicated exclusively to the progress of the science and art of surgery. Free from prejudices and replete with ideals, it evaluates only the intrinsic merit without distinction of creed, race, or nationality. Pasteur said some time ago that science has no boundaries, that knowledge is the patrimony of mankind, the torch that illuminates the world.

"The surgeon is constantly in the line of duty and often does his work at the borderline of life—a life, perhaps, that moves toward the realm of the Creator. Robin justly stated that the surgeon of today would have been, in the Athens of the sixth century, the first man of the Republic.

"However, the first man of the Athenian republic could not be, in the Mexico of today, but the man with faith in the first citizen of the Republic. In fact, when civic virtues are conspicuously exemplified in the Chief of the State, when as in ancient Athens, notwithstanding the turbulence of the epoch, he furthers the progress of the sciences and arts, secure of his path of righteousness and attuned with destiny, such faith opens a path to heaven which, parachute-like, spreads beyond national frontiers. The laurels of achievement, toiled for with fervor, symbolize the spirit of the universal fatherland, rendering honor to whom honor is due. Thus, in that spirit the International College of Surgeons renders homage to one to whom it is so justly due.

"In the name of the International College of Surgeons, therefore, as its Vice-President and by virtue of this charge vested in me, I confer upon you, General Manuel Avila Camacho, Constitutional President of the Republic of Mexico, the generous champion of progress of the sciences and arts in this, our fatherland, old cradle of culture in America, the Academic Degree of Fellow Honoris Causa, the highest our College affords, and place upon your bosom the Academic Medal, symbolizing hierarchy of worthiness and merit, so justly due you as a man of noble aspirations."

In presenting a miniature of the President's medal designed by Mrs. Gloria S. de Manzanilla, wife of the Mexican Vice-President of the College, to Mrs. Soledad O. de Avila Camacho, wife of the Constitutional President of the Republic of Mexico, she stated:

"Madam:

"Your distinguished husband, the President of the Republic, has just received the Academic Degree of Fellow Honoris Causa, the highest of the International College of Surgeons.

"Following an old knightly tradition that reflects upon the noble home companion of the achievements, merits and rewards of the husband, the College considers with good will the use of the respective medal reduction, by the wives of their Fellows.

"In the name of the wives of the Fellows of the College, who share the anxieties, sacrifices and joys of their husbands, I have the honor of presenting to you this medallion, though small in size, it is great in symbolism. I place it upon your bosom as a token of just homage to your virtues as a noble wife of a great man in the lofty and traditional sense of the Mexican home."

His Excellency, the President, responded as follows:

"My wife and I are grateful for this very special distinction, which we feel is undeserved, but which we are pleased to accept, considering it as a bond of cooperation in the generous work that you are performing."

Presidential party on the occasion of conferring the Fellow Honoris Causa upon His Excellency, General Manuel Avila Camacho, President of the Republic. From left to right: Dr. Gonzalo Castañeda, President of the Mexican chapter; Dr. Gustavo Argil, Director of the Faculty of Medicine; Señora doña Maria Luisa O. de Castañeda, Señora doña Gloria L. de Manzanilla, Señora doña Soledad O. de Avila Camacho, General don Manuel Avila Camacho, Dr. Manuel A. Manzanilla, Vice President of the International College of Surgeons; Dr. Victor Fernández Manero, Chief of the Department of Public Health; Dr. Mario Quiñones H., Secretary General of the Department of Public Health; Dr. Miguel López Esnaurrizar, Regent of the Mexican Chapter, and Dr. Francisco Fonseca García, Secretary of the Chapter. Dr. Darío Ferñandez Fierro, Vice President of the Chapter was also present.

Entrega Del Diploma Y Medalla Fellow Honoris Causa Hizo Al Presidente Constitucional De Los Estados Unidos Mexicanos

ENTREGA del Diploma y Medalla *Fellow Honoris Causa* del Colegio Internacional de Cirujanos, que el señor doctor don Manuel A. Manzanilla, Vicepresidente del mismo, hizo al señor General de División don Manuel Avila Camacho, Presidente Constitucional de los Estados Unidos Mexicanos:

Señor Presidente de la República:

El Colegio Internacional de Cirujanos, por unánime acuerdo de su Consejo Ejecutivo Internacional, ha conferido a Usted el grado académico de *Fellow Honoris Causa*, el más alto del Colegio.

Bien conocido es ya internacionalmente su generoso empeño de estadista, en favor del progreso de la ciencia y el arte. México reunió hace un año en su capital la III Asamblea Internacional de Cirujanos, bajo la presidencia honoraria de Usted, y esta fué sin duda una de las manifestaciones más preclaras y significativas de su noble empeño, dado que la Cirugía, a cuya elevación tendió la Asamblea, compila en sí el arte y la ciencia, divinos conforme al bello pensamiento de Bóttini'.

Si la Cirugía es divina, nada más difícil que servir a la divinidad. No basta amar a los hombres. Es necesario amarlos piadosamente, sin falsas actitudes, sin pasiones bastardas, serena, silenciosamente, como el asceta ama a sus hermanos, con el solo afán de rescatarlos y salvarlos.

El Colegio Internacional de Cirujanos es una institución científica, dedicada exclusivamente al progreso de la ciencia y el arte de la Cirugía. Libre de prejuicios y pleno de ideales, sólo atiende al mérito instrínseco, sin distinción de credos, razas a nacionalidades. Pasteur dijo hace tiempo que la ciencia no tiene patria, porque el saber es patrimonio de la humanidad, la antorcha que ilumina al mundo.

El cirujano es un hombre que realiza su obra al margen de la vida, una vida que se mueve al margen del Creador, un creador, imperfección humana si se quiere, que actúa en forma inusitada más allá de la conciencia de la vida. Robin ha dicho con razón, que el cirujano actual hubiera sido en la Atenas del siglo VI el primer hombre de la República.

Más el primer hombre de la república ateniense, no podría ser en el México de ahora, sino el hombre con fe en el primer hombre de la República. En efecto, cuando en el Jefe del Estado florecen las virtudes ciudadanas de manera insigne, cuando como en la antigua Atenas, no obstante la violencia de la época, impulsa el progreso de la ciencia y el arte, seguro del bien y del destino, el grito de la fe abre el cielo como un paracaídas. Se extiende entonces más allá de las fronteras nacionales, adentrándose en el espíritu de la patria universal, la virtud de las palabras justicieras que se pronuncian con fervor, y se rinde honor a quien honor merece.

El Colegio Internacional de Cirujanos rinde honor a quien honor merece. El Colegio consuma en este momento, un acto de justicia común y de fe colectiva. En nombre del Colegio Internacional de Cirujanos, como Vicepresidente del mismo, y con la representación potencial necesaria, a Usted, señor General de División don Manuel Avila Camacho, Presidente Constitucional de los Estados Unidos Mexicanos, generoso paladín del progreso de la ciencia y el arte en esta patria nuestra, vieja cuna de cultura en América, confiero el grado académico de *Fellow Honoris Causa*, el más alto del Colegio, y sobre vuestro pecho de noble varón, me permito colocar la Medalla académica, símbolo de jerarquía y merecimiento.

PRESENTACION de la Medalla (reducción) *Fellow Honoris Causa* del Colegio Internacional de Cirujanos, que la señora doña Gloria S. de Manzanilla, esposa del Vicepresidente mexicano del Colegio, hizo a la señora doña Soledad O. de Avila Camacho, esposa del señor Presidente Constitucional de los Estados Unidos Mexicanos:

Señora:

Su digno esposo el señor Presidente de la República, acaba de recibir el grado académico de *Fellow Honoris Causa*, el más alto del Colegio Internacional de Cirujanos.

Siguiendo una vieja tradición caballeresca, que hace reflejar sobre la noble compañera del hogar los triunfos, merecimientos y galardones del esposo, el Colegio considera con beneplácito el uso de la reducción de la Medalla respectiva, por las señoras esposas de sus Fellows.

En nombre de las damas que comparten el hogar de los Fellows del Colegio, muchas de las cuales ahora también comparten desvelos, inquietudes y sacrificios, tengo el honor de presentar a Usted esta pequeña Medalla, grande en simbolismo, que prendo en su pecho como justo homenaje a sus virtudes de noble esposa, en el más puro y tradicional sentido del hogar mexicano.

EN LA RESIDENCIA PRESIDENCIAL DE LOS PINOS, México, D. F., a 5 de agosto de 1942. Efectuada a las 17 horas, la entrega del Diploma y Medalla *Fellow Honoris Causa* al señor Presidente de la República, y de la Medalla (reducción) *Fellow Honoris Causa* a su muy distinguida señora esposa, el señor Presidente de la República se dirigió al señor

doctor Manuel A. Manzanilla, Vicepresidente del Colegio Internacional de Cirujanos, en los términos siguientes:

Señor Doctor:

Mi esposa y yo agradecemos esta señalada distinción, que juzgo inmerecida pero que acepto complacido, considerando que es un vínculo de cooperación en la obra generosa que ustedes están realizando.

El acto tuvo lugar en un ambiente de sencillez y distinción, con la asistencia siguiente:

Señor Presidente de la República, General de División don Manuel Avila Camacho, y su señora esposa doña Soledad O. de Avila Camacho.

Senor Vicepresidente del Colegio Internacional de Cirujanos, Doctor don Manuel A. Manzanilla, y su señora esposa doña Gloria S. de Manzanilla.

Señor Jefe del Departamento de Salubridad Pública, Doctor don Víctor Fernández Manero.

Señor Presidente del Capítulo Mexicano del Colegio, Doctor don Gonzalo Castañeda, y su señora esposa doña María Luisa O. de Castañeda.

Señor Vicepresidente del Capítulo Mexicano del Colegio, Doctor don Darío Fernández Fierro.

Señor Regente Nacional del Capítulo Mexicano del Colegio, Doctor don Miguel López Esnaurrízar.

Señor Secretario del Capítulo Mexicano del Colegio, Doctor don Francisco Fonseca García.

Señor Director de la Facultad de Medicina de la Universidad de México, Doctor don Gustavo Arg'l.

Señor Secretario General del Departamento de Salubridad Pública, Doctor don Mario Quiñones H.

SOLEMNE ENTREGA DE DIPLOMAS A NUEVOS FELLOWS, MIEMBROS Y ASOCIADOS del colegio internacional de cirujanos, capitulo Mexicano, en el salon de actos de la Facultad de Ciencias Medicas y Biologicas, Universidad Nacional de Mexico, el 20 de agosto de 1942, Presidiendo el señor doctor Víctor Fernández Manero, Jefe del Departamento de Salubridad Pública, como Representante del Señor Presidente de la Republica, General de Division Don Manuel Avila Camacho, *Fellow Honoris Causa.*

Discurso oficial por el señor doctor Don Gonzalo Castañeda, Presidente del Capitulo Mexicano del Colegio:

Señor Representante del señor Presidente de la República, señores miembros del Colegio, señores todos:

La Filosofía, que busca la causa primera de las cosas, no ha unificado el pensamiento de los hombres; la Religión, que liga el espíritu co la Divinidad, tampoco ha unido los corazones en el amor; la Moral, la predicación, la fuerza y el castigo han sido impotentes para hacernos buenos; la humanidad vive agitada por antagonismos, dispersa y desmembrada por la idea, por la pasión y el interés; sólo la Ciencia mágica funde al género humano porque es la verdad, y la verdad es universal y eterna. Entre las ciencias hay una que estudia lo más grande y trascendente del mundo, que es la vida, se llama la Medicina; para ella no hay razas ni cofesiones, para ella sólo existe la muerte y el dolor, únicas realidades que igualan a las creaturas de la tierra.

Unos médicos visionarios, allá en Ginebra, cogieron el ideal de la hermandad en el saber, y para transformarlo en acción llamaron a obreros de lo intelectual, sin mirar su historia, lengua ni nacionalidad, y con el lema "la Ciencia no tiene Patria" crearon el Colegio Internacional de Cirujanos; se acordaron de que México existe y quedó incorporado, así nació el Capítulo Mexicano.

Los quirurgos mexicanos del Colegio no pretenden posar las cumbres de la sabiduría, son hombres de estudio y aliento cívico que se afilian en el movimiento de avance de México, los enardece un excitante, la superación, los aviva la idea de hacer ciencia vernácula, porque el Capítulo de México se formó y labora para la Patria.

El Capítulo Mexicano del Colegio Internacional de Cirujanos es de ayer, cada día lo refuerzan plenos de aspiración, nuevos miembros de vigor y lozanía mental; ya cuenta con orgullo cómo, a invitación del Gobierno de la República, una Asamblea Internacional eligió como sede la Capital de nuestra Nación; otro suceso acaba de engrandecerlo y dignificarlo, nuestro honorable Presidente de la República, señor General don Manuel Avila Camacho, es ya Fellow Honoris Causa del Colegio, grado el más alto que confiere la Institución. Ese título no es una presea al médico eminente, es un homenaje al protector del Colegio; su aceptación, un acto simbólico y significativo, dice en alta voz que la obra es simpática al Estado, dice además que el gobernante comprende, que si al pueblo hay que nutrirle el músculo hay que vigorizarle también el cerebro.

Al presente se advierte en la República una actividad médico quirúrgica intensa, síntoma de civilización, augurio de hermoso porvenir; se han multiplicado las Academias, las Sociedades, las Asambleas, los Congresos médicos, es la época de un Renacimiento. de una vida superior. Este acto agrega una efeméride grata, el ingreso de nuevos miembros al Capítulo Mexicano del Colegio; sean bienvenidos y que su actuación futura corresponda a su labor pasada, meritoria y honesta. Han sido ustedes más afortunados que sus predecesores, recibirán hoy sus diplomas no por las manos mías de humilde Regente, sino por los del señor Representante del Jefe de la Nación.

Fellow en inglés quiere decir compañero, hermano, amigo; yo soy Fellow, permitidme entonces señor Representante del señor Presidente, que diga hoy al señor Presidente con emoción compañero, hermano, amigo; yo quisiera que el Colegio Internacional de Cirujanos fuera de la alcurnia, que tuviera el prestigio y el renombre del Instituto de Francia, para que como Bonaparte que anteponía en sus decretos su título de Miembro del Instituto, el señor Presidente en ocasiones semejantes, al Generalato o al nombre de la Suprema Magistratura antepusiera su grado de Fellow Honoris Causa, pero ya que ello no sería dable por la índole de nuestras instituciones, ha de guardarlo como galardón concedido a un protector de la cultura de México.

La persona del señor Presidente fué un día discutida, negada, pero ha vencido las resistencias, ha conquistado la opinión, su Gobierno es fuerte porque es justo,

ha sentido que el sol de México es para todos, opulentos y desheredados, es humano y comprensivo.

El mando que el señor Presidente ejerce y que recibió del pueblo es temporal y transitorio, tendrá que devolverlo un día a ese mismo pueblo soberano; pero lleva algo que es propio, y que le acompañará siempre, son las charreteras y las águilas que ganó en su carrera militar y vida de patriota; por igual, puede cubrirse doquiera y siempre con el birrete, lucir la venera y revestir la toga de Fellow a la usanza de los próceros romanos, ese talar es vitalicio.

La presencia del señor Presidente, en esta ocasión dignamente encargada a Usted como su Representante personal, honra al Capítulo Mexicano, su compañía lo anima, su nombre limpio y conspicuo en la lista de sus miembros lo estimula y compromete. No podríce incontrarse aquí dislocado de sus labores de Estado, asistente aquí está gobernando, porque sancionar, alentar actos de cultura que miran a la Patria es gobernar.

Sr. Dr. Víctor Fernández Manero, Representante personal del C. Presidente de la República:

Es para nosotros motivo de especial satisfacción, recibir a usted en nuestra Escuela de Medicina.

Treinta años apenas después de la caída de nuestro —magnífico Cuauhtemoc, en el año de 1551, el Virrey de la Nueva España, don Antonio de Mendoza, promulgaba la cédula real que instituía la Universidad de México, a iniciativa del Ayuntamiento y otras corporaciones de la Capital.

Dos años más tarde, el 25 de enero de 1553, abría sus puertas, la Universidad más antigua de América, en la casa que fué de doña Catalina de Moncada, situada en la esquina de las hoy llamadas Calles del Seminario y Moneda.

Esta antigüadad de casi cuatro siglos, encierra una tradición grandiosa para nuestra Universidad, de la cual nos sentimos positivamente orgullosos.

Dentro de ella en 1578, se inauguró la enseñanza de la medicina; pero no fué sino hasta el siglo pasado en 1833, cuando por decreto del Dr. Valentín Gómez Farías, se organizó nuestra Escuela de Medicina, sobre bases científicas modernas.

Desde entonces hasta la fecha, la misión de esta Escuela ha sido la de formar médicos, que esparcidos en los confines de la República y en países extranjeros, han cumplido con su noble tarea, destacándose muchos que han constituído verdaderas glorias de la medicina mexicana.

Con todo y ser esta labor, altamente meritoria, no hasido la única emprendida por esta Escuela venerable. Cumpliendo generosamente con sus ideales de "Alma mater," de difusión de la cultura médica, ha dado albergue dentro de sus muros centenarios a la mayor parte de las corporaciones científicas dedicadas al cultivo, progreso y ensanche de los conocimientos médicos.

La Academia Nacional de Medicina, la Academia Mexicana de Cirugía, la Sociedad Mexicana de Medicina Interna, la Sociedad Mexicana de Pediatría, etc. etc., son la forma en que se proyecta el impulso de difusión de nuestra Escuela.

En esta vez, la Escuela de Medicina, da ocasión a que El Colegio Internacional de Cirujanos, desarrolle uno de sus actos culturales. Este jóven organismo, ha demostrado ya sus ideales de estudio y progreso en el terreno quirúrgico, ha recibido la ayuda del Presidente de nuestra Nación, quien además es Fellow Honoraris Causa de ella; así como son miembros otros muchos de nuestros catedráticos. Por todos estos motivos, la Escuela de Medicina, tiene confianza en su actuación.

Al recibir a usted, señor representante del Ciudadano Presidente de la República, quiero decirle a nombre de nuestra Facultad: *Sed Bienvenido.*

C. Jefe del Departamento de Salubridad, representante del Señor Presidente de la República, *Fellow Honoris Causa* del Colegio Internacional de Cirujanos:

Señor Presidente del Capítulo Mexicano del Colegio, Señores, Compañeros:

Los Médicos Cirujanos mexicanos aceptados como Fellows, Miembros y Asociados del Colegio Internacional en la Asamblea General que tuvo verificativo en Agosto—del año próximo pasado en esta Capital, y que en suerte nos ha tocado recibir hoy los diplomas correspondientes de manos del digno representante del más alto dignatario de la Nación y, a la vez en este acto, del propio Colegio, no podemos ocultar la emoción que nos embarga al considerar el honor que con ello se nos otorga.

Modestos trabajadores en el campo de las Ciencias Médicas, felíz circunstancia que nos acerca al conocimiento de la naturaleza humana y que nos permite saber de sus flaquezas y dolores, dándonos oportunidad para tratar de remediarlos, a veces inultimente; es en verdad satisfactorio para nosotros que en el seno de una Asociación del prestigio internacional del Colegio, se reconozca nuestro humilde esfuerzo quirúrgico y se nos abran de par enpar sus puertas, acreditando nuestro ingreso.

Pero este hecho, que podía enorgullecernos, en realidad no nos llena de orgullo, porque comprendemos que, más que los méritos con que podamos contar para ser ahora miembros de esa prestigiosa Asociación que ostenta como lema el aforismo del inmortal Pasteur, es la persecución de los nobles fines sobre que asienta su actuación o sea el avance del arte y de la ciencia de la Cirugía, estableciendo un estrecho interambio con los que honestamente la ejercitan en todos los países del mundo, lo que ha permitido nuestro ingreso.

El honor que se nos ha hecho, y que mucho agradecemos, nos corforta y estimula; pero nos damos cabal cuenta de que impone obligaciones, deberes que cumplir.

Podéis estar seguros, señores funcionarios del Colegio Internacional de Cirujanos, que nuestro esfuerzo se redoblará en todos sentidos por lograr en nuestro medio los altos fines que la Institución persigue: Trabajaremos honestamente, intensamente, estudiando mejor a los enfermos; mejorando nuestras técnicas, investigando dentro de nuestras posibilidades; así quizás, nos hagamos dignos del honor que se nos ha conferdio y en unión delos demás miembros del Capítulo de México, lograremos agregar un grano de arena en el avance del Arte y de la Ciencia de la Cirugía del lustre del Colegio Internacional de Cirujanos y del prestigio científico de nuestra amada Patria.

The Seventh National Assembly of the United States Chapter of the International College of Surgeons

Those who have attended have been pleased with the brilliancy of the scientific and social activities of this meeting. The Arrangement Committees deserve a great deal of credit for the results they have obtained. Since executives recording such occasions may frequently be swayed in their point of view, it is perhaps best to let others speak for us. Thus, the subjoined two editorials give a bird's-eye view of the function. The *Rocky Mountain Medical Journal,* in its August, 1942, issue comments on this Assembly as follows:

INTERNATIONAL COLLEGE OF SURGEONS' SEVENTH ANNUAL ASSEMBLY

"The National Assembly of the International College of Surgeons was held in the Shirley-Savoy Hotel on July 15, 16, 17, and 18. Over 1,000 doctors and their wives from all parts of the country and Mexico attended the meetings. More than 100 speakers appeared on the regular program and the panel discussions, and more than forty motion pictures, many of them with sound, were shown. Papers which were read entailed virtually the entire field of surgery.

"Emphasis on the treatment of war injuries characterized this Seventh Annual Assembly. Heading the discussion which centered on the military phase of surgery was a military symposium, presided over by Brig. General Omar H. Quade, commanding officer of Fitzsimons General Hospital, with Dr. John Amesse and Mr. Harvey Sethman, of Denver, participating. Of special interest were two series of sound films, made in Moscow under the direction of Nicholai N. Burdenko, chief surgeon of the Russian armies. Academician Burdenko was awarded an honorary fellowship in the International College of Surgeons.

"There were 144 physicians to be given recognition through fellowship, membership, or as an associate at the Convocation held in Phipps Auditorium on Thursday evening, July 16. Over 100 of those attending, including many of the leading speakers, were in uniform.

Opening ceremony at the Convocation of the United States Chapter of the International College of Surgeons in the Phipps Auditorium, Denver, Colorado, July 16, 1942.

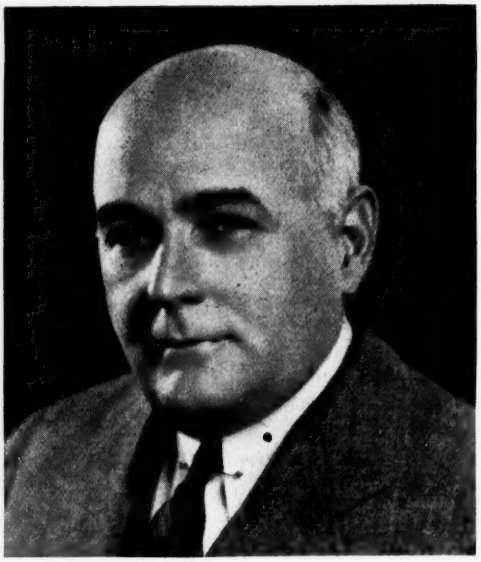
"Operative clinics were held in all Denver hospitals, including the great army base, Fitzsimons General Hospital, on July 18. Many of the subjects at Fitzsimons Hospital were men in the American armed forces who had been injured in the Japanese attack on Pearl Harbor. Many scientific exhibits at the headquarters hotel attracted attention and exacted favorable comment.

"Entertainment included the President's Reception and Ball, a box supper and theater party, a tea at Children's Hospital, and trips to scenic beauty spots in the nearby Rockies. Dr. J. Rudolph Jaeger, of Denver, was elected president of the United States Chapter of the College. For the ensuing year he will serve as president-elect of the chapter, and Dr. Thomas A. Shallow, of Philadelphia, will serve as president.

"Success of this meeting, one of the largest medical meetings ever held in Denver, surpassed anticipations of even the most optimistic. As a memorable midsummer meeting in the midst of a war—with its travel handicaps, members in military service, others about to enter the service but deluged with pre-departure business, and other incidental drawbacks—this assembly will supply effective data for consideration in future attractions of this type. Advocates of fewer medical meetings have favored combined, successive, or concomitant meetings in Denver during the summer. Vacation attractions in this region would bring many visitors and their families. Statistics upon this recent meeting indicate that such features have been enjoyed before or after the meeting and did not detract from splendid attendance at the scientific assemblies. In any event, officers and committeemen of this live and rising organization are to be complimented upon launching a bold adventure in medical organizational activity beset with handicaps. A valuable precedent may have become established—perhaps to be followed through after the war!"

Dr. Thomas A. Shallow was inducted into the office of President of the United States Chapter. **Dr. J. Rudolph Jaeger** was named President-Elect, and **Dr. William Bates** first Vice-President.

Dr. Shallow is Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia. He was educated in the Philadelphia public schools and was a graduate of Central High School. He received his M.D. degree from Jefferson Medical College in 1911, and pursued post graduate work at the Rockefeller Institute. During World War I Dr. Shallow was Captain of the Medical Corps, U. S. Army. In 1931 he was appointed Professor of Surgery at Jefferson Medical College. Our new President of the United States Chapter is a member of the College of Physicians of Philadelphia, a Fellow of the Philadelphia Academy of Surgery, a Fellow of the American College of Surgeons and of the International College of Surgeons, and a Founder Member of the American Board of Surgery. Dr. Shallow also takes a very lively interest in the civic affairs of his city



Thomas A. Shallow, M.D., F.I.C.S., F.A.C.S.
President, U. S. Chapter

and is a member of the Board of Directors of City Trusts, a member of the Board of Directors of Philadelphia House of Detention, and a member of the Advisory Board of Directors of Municipal Court.

His gastrostomy and operation of pharyngeal diverticulum, as well as his contributions to "Cyclopedia of Medicine" and numerous other contributions to surgical literature are well known.

Dr. J. Rudolph Jaeger was born October 29, 1895, in Clarksville, Missouri. During World War I he served with the 354th Regiment of the 89th Division. In 1918 he received his A.B. degree from the University of Missouri, and in 1920 his M.D. from the University of Pennsylvania. His internship and chief residency were spent in Denver General Hospital, Denver. Since that time he has occupied the following posts: Part time instructor in Anatomy, Pathology, and Physiology at the University of Denver School of Dentistry, 1922-1928; Assistant in general surgery to Dr. Charles Jaeger, 1922-1928, Extramural student, Neurological Surgery, service of Dr. Walter Dandy, John Hopkins Hospital, 1928-1929; at present he is Assistant Professor of Surgery in charge of Division of Neurosurgery, University of Colorado School of Medicine and Hospitals,

J. Rudolph Jaeger, M.D., F.I.C.S.
President-Elect, U. S. Chapter

William Bates, M.D., F.A.C.S., F.I.C.S.
Vice-President, U. S. Chapter

Neurosurgeon to Presbyterian and Children's Hospitals Consulting and Attending Neurosurgeon, Fitzsimons General Hospital, U. S. Army.

Dr. Jaeger is a member of the Central Neuropsychiatric Association and Licentiate of the American Board of Neurological Surgery.

Our newly-elected First Vice-President of the United States Chapter, **Dr. William Bates,** was graduated from the University of Pennsylvania Medical School. He served as Lieutenant Colonel in the Reserve Corps until 1934. Dr. Bates is surgeon at the Graduate and Presbyterian Hospitals, Philadelphia, Professor of Surgery, Graduate School, University of Pennsylvania, member of the Board of Directors of the Aesculapian Club, Medical Club, and Philadelphia Medical Alumni Association of the University of Pennsylvania, member of the Philadelphia Academy of Surgery, Philadelphia College of Physicians, American College of Surgeons and International College of Surgeons.

Dr. Bates has just been made President of the Philadelphia County Medical Society for this year.

Dr. Arnold S. Jackson, speaking editorially in the *Jackson Clinic Bulletin,* has the following to say:

MEETING OF THE INTERNATIONAL COLLEGE OF SURGEONS

"The seventh national assembly of the International College of Surgeons was held in Denver, July 15 to 18 and was attended by surgeons from our own country as well as from several foreign countries. The writer was privileged to attend the meeting as a guest speaker and is pleased to make known to his readers some of the facts about this comparatively new surgical organization. At the time of its inception there was some feeling among surgeons in this country that the existing organizations were sufficient to perform the functions of a society of this type. Despite this and other handicaps a group of earnest hard working surgeons have gradually built up an organization that is each year attracting more leaders of the profession to its ranks. Listed among its officers and members are such well known American names as Drs. Andre Crotti, Fred Albee, Chevalier Jackson, Max Thorek, Thomas Shallow, Raymond McNealy, Desiderio Roman, Thomas Carmody and J. Rudolph Jaeger.

"Dr. Andre Crotti has been one of the leaders in the International College of Surgeons and during the twenty years the writer has known this dynamic Swiss

surgeon, he has always held him in the greatest esteem, and has highly treasured his friendship. His monumental work on the thyroid gland is considered outstanding throughout the medical world. It is encyclopedic in scope and serves as a gauge of the tremendous enthusiasm that Andre Crotti is putting behind his effort to build up this International College. He sees in this organization not only the opportunity to advance the science of surgery but also to promote a better understanding between those who are working for the good of humanity in every country. After the war he feels that there will be a great need and a great opportunity for the International College to rebuild and rekindle friendships among the various countries of the world. It will offer also a splendid chance for members of the College to visit their colleagues in foreign countries.

"Another hard working official is Dr. Max Thorek who is well known for his several excellent surgical monographs. He is the executive-secretary and editor of the official medical journal of the International College. Max Thorek is heart and soul behind this organization.

"Many of our leading medical societies of today had their inception under far less auspicious conditions. It seems certain that with such sincere hard working surgeons as these and many others of their type, the International College will in time become a great medium for the exchange of surgical knowledge and the promotion of international goodwill.

"The trip to Denver was especially pleasant because of the fine train service on the "City of Denver" of the Union Pacific line. While not as fast as flying, these modern streamliners literally take one's breath away compared to travel a few years ago. A day and a night to Denver was once considered fast time. On this trip it was possible to leave Madison Monday afternoon, spend three and a half days in Denver and still return to the clinic Friday noon. Nevertheless, unless forced to do so, travel in these times is no special treat. Some fifty thousands soldiers are stationed in or around Denver. Every hotel room was taken and only through the kind effort of Dr. George Gillen, efficient secretary of the Assembly, was the manager persuaded to part with a room.

"There may be noisier hotels in America than Denver's big three but if there are the writer has yet to try them. Some four streetcar lines converge at various angles and grind up hills all within a small area and the night sounds are a good preparation for the battle front. Fortunately the writer was advised recently by an experienced traveler of some anti-noise ear stopples that really work, and for the benefit of readers who may likewise be victims of loud noises these are highly recommended. They may be obtained from the Flints Products Company, New York City. With their help a peaceful sleep until 7:30 a.m. was enjoyed. Arriving a day in advance of the meeting and finding an old acquaintance, Dr. Brien King of Seattle on hand, we decided to escape Denver's unusual weather (99°) and drive to the mountains. Before doing this we enjoyed luncheon with Dr. Casper Hegner formerly professor of surgery of the Colorado School of Medicine at Denver. As former president of the Western Surgical Association, Dr. Hegner has long been recognized as one of the leading surgeons of the far west, and his contributions to thoracic surgery have been especially noteworthy.

"The trip to the mountains was delightfully refreshing and cool and we enjoyed the views of the snow-capped Mount Evans and Long's Peak, as well as the roaring mountain streams, the natural outdoor theater, the fragrance of the pines and the colorful mountain lakes. As a vacation playground Colorado has everything to offer.

"The medical meeting like all others attended by the writer in recent months had a distinctive military atmosphere. Many papers were presented by those who had either served in World War I or who are on active duty. Thus Dr. Charles Goodman, clinical professor of surgery at New York University Medical College and a veteran of the British Medical Service in 1917, made a plea to use sutures for wounded blood vessels. He stated that in the last war, Allied doctors refused to see the value of repairing the blood vessels injured by the missiles of war. They used ligatures or methods of tying the vessels which cut off the circulation and almost inevitably resulted in gas gangrene causing loss of life or limb. The Central powers recognized the value of suturing and saved thousands of limbs and many lives. He stated that those who opposed suturing did so because they felt that all war wounds were potentially infected. This he did not believe to be true. (Author's note—certainly in this war with the use of sulfonamides this is not true). Dr. Goodman felt that any surgeon can carry out suturing at the front, needing only a fine cambric needle and fine silk and using an overhand stitch.

"A military symposium at the Shirley-Savoy hotel on the evening of the opening day's program was well presented. Dr. John Amesse who served with Dr. Heiser in the United States Public Health Service felt that the American doctors were not prepared sufficiently to treat tropical diseases.

"Military diseases—plagues that follow military disaster—have swept over the world and can do so again," he said. 'The conquest of yellow fever is not complete, the airplanes can carry it to the United States in one day from South America. Typhus in South Africa is only two days from here and cholera and bubonic plague are three days away in the Far East. Malaria, the real captain of the men of death, caused 17,000,000 deaths last year. Our doctors will need to know all they can about it.'

"As a diversion, Dr. Amesse told about how he was entering Manila Bay on a little Dutch steamer in 1922, when a large liner suddenly loomed up ahead out of the mist. The skipper of his boat immediately called out to the Captain of the big ship and requested to know the name of his vessel. The Captain answered, 'the Hellwich,' to which the skipper promptly replied, 'Ya, the hell which you, too.'

"Mr. Harvey Sethman, able secretary of the Colorado State Medical Society, gave the clearest exposition on the procurement and assignment service to which the writer has listened. He urged doctors under forty-five who are physically fit to enlist but said that those between fifty and eighty should stay to take care of the home front. He stated that 20,000 doctors had so far entered the service but that approximately 23,000 more would be needed by December.

In this short review it is impossible even to mention by name the many excellent papers that were presented or to speak of the splendid panel discussions. Dr. Edwin Henry of Omaha, gave a fine dissertation on the acute surgical abdomen that could be heard with profit by anyone.

"Dr. Brien King gave his splendid discussion on a function restoring operation for bilateral abductor cord paralysis. Mention of this original work has previously been given in this column and the writer is pleased to report that Dr. King has now received national recognition from both the American Goiter Association and the American Laryngological Society for his voice and breath restoring operation.

"Dr. Andre Crotti drew upon his long experience to tell of some of the pitfalls in thyroid surgery and his discussion fully covered the subject.

"Dr. Manuel Manzanilla of Mexico City discussed the surgery of diabetes mellitus. Dr. Alfred Strauss, one of Chicago's leading surgeons, gave a fine review of the end results of twenty-five years' experience in gastric surgery. The writer had the opportunity to observe Dr. Strauss in the operating room on several occasions and has always enjoyed his fine technique, his sincerity and his kind hospitality.

"A round-table discussion skillfully conducted by Dr. Clark Brooks of Detroit revealed some valuable information to the several hundred who attended.

"The writer presented Chemotherapy as Related to Surgery and reiterated reports previously presented in this column together with a new statistical review. Up to the present time at the clinic we have used sulfathiazole in 1, 2, or 3 grams prophylactically within the peritoneal cavity in approximately 300 cases with no untoward results. A series of 370 major and 128 minor operations were reported in which sulfathiazole was used either in the incision, within the peritoneal cavity or was administered by mouth or intravenously. In no instance in which the drug was used prophylactically in a clean case, did infection occur.

"Most of the reports in the literature including the J.A.M.A. editorial columns, however, favor the use of sulfanilamide over sulfathiazole.

"The high light of the meeting from the writer's standpoint was a visit to the new army $4,500,000 Fitzsimons General Hospital. Col. R. B. Hill was a gracious host to Drs. King, Mastin and the writer. His aid, Captain Stearns, in charge of anesthesia, drove the party in his beautiful open car to the hospital which is approximately eight miles from Denver. We were taken to the officer's club where about 160 medical men are stationed, were served luncheon and given an opportunity of meeting several of the staff. Then Col. Hill took us through the institution which is just about the last word in hospitals and equipment. It is a permanent army hospital and serves a wide area. We saw many cases of thoracic and abdominal surgery all of which had been given the most expert surgical care under the direction of Col. Hill and his staff. There were many fracture cases and one especially fine result of a case of interscapulothoracic amputation for malignancy. Not only were the surgical results impressive, but the morale of the patients was even more remarkable. One soldier had been on continuous oxygen since 1940 and another was in the late stages of malignancy. In spite of their handicaps, one and all had a cheerful response to Col. Hill's queries and one could easily read in their faces a feeling of warmth and gratitude for this splendid army surgeon and all have a keen desire to return to active duty as soon as possible."

At the Convocation, the following received the respective degrees and distinctions indicated below:

HONORARY INTERNATIONAL FELLOWS

Juan M. Allende, Cordoba, Argentina
Nicholai M. Burdenko, Surgeon General Russian Army, Moscow, Russia
Wm. Carpenter MacCarty, Sr., Rochester, Minn.
Major General James Magee, Surgeon General, U. S. Army
Rafael Noguiera, Havana, Cuba
Ricardo Nunez Portuondo, Havana, Cuba

FELLOWS

Joseph Paul Alvich, New York City
Roger Anderson, Seattle, Washington
Joseph I. Anton, New York City
Lorrimer Armstrong, Westfield, New Jersey
William Finley Baillie, Fargo, North Dakota
Chas. Grant Bain, Chahalis, Washington
Herbert Otto Bames, Los Angeles, California
Harry Jacobs Bartron, Watertown, South Dakota
Richard Joseph Behan, Pittsburgh, Pennsylvania
Sylvester Nicholas Berens, Seattle, Washington
Sebastian John Carnazzo, Omaha, Nebraska
Victor Robinson Dacken, Cody, Wyoming
Kent Edward Darrow, Fargo, North Dakota
Joseph Manuel de los Reyes, Los Angeles, California
Eugene C. de Savitsch, Washington, D. C.
Frederick George Dilger, Hackensack, New Jersey
Herbert Gerald Dittmar, Brooklyn, New York
George Kinney Dunklee, San Luis Obispo, California
Frederick Victor Emmert, St. Louis, Missouri
David Carl Enloe, Sherman, Texas
John Robert Evans, Denver, Colorado
William Patton Fite, Muskogee, Oklahoma
Bernard Justin Gilshannon, Bellingham, Washington
Earl John Halligan, Jersey City, New Jersey
Harold Joseph Halligan, Jersey City, New Jersey
Herbert L. Harvey, Casper, Wyoming
Julius Hass, New York City
James W. Hendrick, Amarillo, Texas
Elmer Hess, Erie, Pennsylvania
Dean Wesley Hodges, Denver, Colorado
Karl S. J. Hohlen, Lincoln, Nebraska
Hall Gillam Holder, San Diego, California
Otho C. Hudson, Hempstead, New York
Gunnar Jelstrup, Denver, Colorado
Arnold Jacobsen, New York City
George Ray Jewett, Lincoln, Nebraska
Alexander Kaye, New York City
Walter Melody Kearns, Milwaukee, Wisconsin
Frederick Jefferson Kellam, Indiana, Pennsylvania
Howard B. Kellogg, Seattle, Washington
Brien T. King, Seattle, Washington
Owen King, Aberdeen, South Dakota
Lemuel Weyher Kornegay, Rocky Mount, North Carolina
Lemuel A. Lasher, Erie, Pennsylvania
Edward Simon Lauzer, Rock Springs, Wyoming
Clifford Athenius Lutgen, Auburn, Nebraska
Francis S. Mainzer, Huntington, Pennsylvania
Edward W. Marquardt, Elmhurst, Illinois
John Joseph Malee, Anaconda, Montana
Thomas Emmett Mangum, Nampa, Idaho
Fred W. Minty, Rapid City, South Dakota
James Orville Morgan, Gadsen, Alabama
Dayton Henry O'Donnell, Detroit, Michigan
Joseph Anthony Pessolano, Albany New York
Walter Erwin Reckling, Lusk, Wyoming
Roscoe Hulen Reeve, Casper, Wyoming
Josef Francis Replogle, Lander, Wyoming
James Paul Rigg, Grand Junction, Colorado

Magnus B. Ruud, Grand Forks, North Dakota
Emil C. Sauchelli, Brooklyn, New York
Emil Seletz, Los Angeles, California
Walter Taylor Sheets, Salt Lake City, Utah
John Delroy Shingle, Cheyenne, Wyoming
Jess U. Sickenberger, Grand Junction, Colorado
Justin John Stein, San Diego, California
Lee M. Storey, Laramie, Wyoming
Wade Hampton Sutherland, Booneville, Mississippi
Edward Earl Taylor, Denver, Colorado
Wm. MacCheyne Thompson, Delhi, New York
Chester W. Trowbridge, Oak Park, Illinois
Frank Ludwig Unmack, Deer Lodge, Montana
Otto E. Utzinger, Ray, Arizona
George Henry Van Emburgh, Arlington, New Jersey
Philip Wade Whiteley, Denver, Colorado
Frank Willis Yocom, Paso Robles, California

INTERNATIONAL FELLOWS

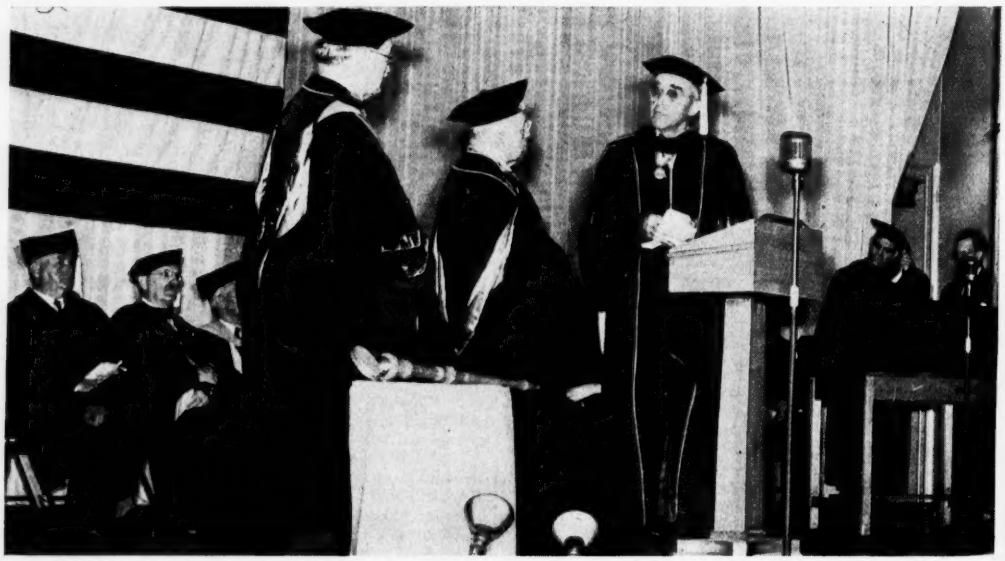
C. A. Ainslie, Guatemala City, Guatemala
Edouard Birabin, Montevideo, Uruguay
Martial Bourand, Port-au-Prince, Haiti
Jorge Castro Gouvera, Santiago, Chile
Agustin Inostrosa P., Santiago, Chile
Margaret Hie Ding Lin, Shanghai, China
Elie Sd. Villard, Port-au-Prince, Haiti
Raul Couverrubias Zenteno, Santiago, Chile

MEMBERS

John Henry Burge, Lake Village, Arkansas
Homer Ray Ditmeir, Longmont, Colorado
Paul Edward Haley, South Bend, Indiana
Louis Clark Hepp, Denver, Colorado
John Harry Hayes, Little Rock, Arkansas
Frederick Knowles, New York City
N. Gillmor Long, Lowell, Massachusetts
Bruce Vischer MacFadyen, Philadelphia, Pa.
C. Walter Mattingly, New Orleans, La.
Kenneth Loer McShane, Cheyenne, Wyo.
John K. Patterson, Santa Barbara, Calif.
Luther Courter Sampson, Rochester, N. Y.
Ralph W. Schaeffer, Redondo Beach, Calif.
Albert Pincus Seltzer, Philadelphia, Pa.
Howard Parks Sloan, Bloomington, Illinois
Harry Edward Stuckenhoff, Casper, Wyo.
Myron C. Waddell, Denver, Colorado
William Welch Webster, Greeley, Colorado
Maxwell Fay White, Philadelphia, Pa.

ASSOCIATE MEMBERS

Lial Sylvester Anderson, Worland, Wyo.
William Nowers Baker, Denver, Colorado
Wilbur Guy Ball, Bloomington, Illinois
Robert Webster Binney, Granite City, Ill.
Herman Boughton, Miami Beach, Florida
Norman A. Brethouwer, Denver, Colorado
Ralph McK. L. Buchanan, Phillipsburg, N. J.
Herbert T. Caraway, Billings, Montana
Raymond Hugh Center, Clearwater, Florida
Myron Wentworth Cooke, Longmont, Colo.
Freeman Deyo Fowler, Idaho Springs, Colo.
John Dan Hagood, Clearwater, Florida
David Sinclair Harman, Worland, Wyo.
George Walter Henderson, Casper, Wyo.



Dr. Charles Arnold, Executive Secretary of the United States Chapter (standing on right), presenting the candidates for Fellowship, Membership and Associate Membership to Dr. Desiderio Román (center), retiring President of the United States Chapter during the Convocation. Standing behind Dr. Román is Dr. F. H. Albee, President of the United States Chapter of the International College of Surgeons. Seated, from left to right: Dr. Thomas A. Shallow, President, Dr. Andre Crotti, Past President, and Dr. William Carpenter MacCarty, Sr., of the Mayo Clinic, who received an Honorary Fellowship in the College.

Dr. Desiderio Román delivering the Convocation Address at the National Assembly of the United States Chapter of the International College of Surgeons.

Angus Hinson, Rock Hill, South Carolina
George Edward Kenny, Port Jervis, N. Y.
George H. Lord, Denver, Colorado
Bruce P. Meeker, Wichita, Kansas
Raymond Albert Nethery, Denver, Colorado
Graham Cyrenus Newbury, Cranford, N. J.
Raymond Gerald Ray, Tulsa, Oklahoma
Thurman M. Rogers, Sterling, Colorado
Morris William Selman, Toledo, Ohio
Herschal Vern Soper, Los Angeles, California
Leopold Villareal, El Paso, Texas

ADVANCEMENTS

ASSOCIATE TO MEMBER

Warren Austin Baird, Toledo, Ohio
James Ivor Collins, Toledo, Ohio
George Ferre, Manchester, New Hampshire
Robert Hannon Fitzgerald, Leadville, Colorado
William Winslow Wiedemann, Toledo, Ohio

MEMBER TO FELLOW

Thomas Jefferson Hughes, Roanoke, Virginia
Hannibal Jaworski, Waco, Texas
Louis Lahn, New York City
John Daniel Lamon, Jr., Albuquerque, New Mexico
Eugene A. Ockuly, Toledo, Ohio

ASSOCIATE TO FELLOW

William Harold Meffey, Toledo, Ohio

Besides the numerous scientific papers which were read, clinical conferences held, and round table discussions participated in, clinics in the hospitals of Denver were held as indicated below.

FITZSIMONS GENERAL HOSPITAL

BRIGADIER GENERAL OMAR H. QUADE,
Commanding Officer
and
COLONEL ROBERT B. HILL,
Chief of the Surgical Service.

OPERATIVE CLINICS:

Genito-Urinary Section:
1. Repair of urethal stricture.
2. Nephrectomy.

Orthopedic Section:
1. Arthrotomy, right knee.

Septic Surgery Section:
1. Excision, pilonidal sinus.

EENT Section:
1. Surgical correction, strabismus.
2. Radical mastoid.
3. Caldwell-Luc sinusotomy.
4. Plastic correction, deformity of nose.

Chest Surgery Section:
1. First stage thoracoplasty.
2. Second stage thoracoplasty.
3. Phrenicemphraxis.

Clean Surgery Section:
1. Repair of inguinal hernia.
2. Cholecystectomy.

Women's Surgical Section:
1. Hysterectomy, supracervical.

DRY CLINICS:

Orthopedic Section:
1. Synovectomy, discussion of indications and technique, illustrated by nine cases.
2. Chondromyxosarcoma, discussion of pathology and presentation of two cases treated surgically.
3. Traumatic causalgia, presentation of case.
4. Legg-Perthe disease, presentation of case.
5. Osteoma of head of the radius, presentation of case.

Septic Surgery Section:
1. Ludwig's Angina and deep infections of the head and neck, with a discussion of the anatomy with particular reference to the facial spaces illustrated by anatomical transparencies. Presentation of five cases.
2. Pilonidal sinus as a military problem, with a discussion of the relative merits of the various types of operations. Illustrated by four cases.
3. Reconstruction of traumatic injuries of ear. Presentation of case.
4. Sarcoma of the jaw, presentation of case.
5. Carcinoma of the rectosigmoid, presentation of case.
6. Carcinoma of the lip, presentation of case.

Clean Surgery Section:
1. Carcinoma of stomach, superimposed on chronic atrophic gastritis. Presentation of case.
2. Tuberculoma of brain, involving left and midfrontal region. Presentation of case.
3. Spongioblastoma multiforme, postoperative inoperable tumor of brain. Presentation of case.
4. Herniation of nucleus pulposus, spinal intervertebral disc, with discussion of diagnosis and technique of operation, illustrated by seven cases.
5. Obstructive jaundice of undetermined cause, postoperative cholecystotomy. Presentation of case.
6. Retroperitoneal sarcoma, presentation of case.

Chest Surgery Section:
1. Coelomic cysts of the pericardium, with discussion of the pathology and presentation of case.
2. Bronchogenic carcinoma of the lung with discussion of indications and technique of pneumonectomy, illustrated by two cases who have had successful pneumonectomies.
3. Chronic pyogenic empyema, discussion of treatment with particular reference to technique of unroofing operations, illustrated by three cases.

Genito-urinary Section:
1. Multiple fistulae of the perineum, discussion of case.

Colorado General Hospital Clinics:

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE AND HOSPITAL

DR. MAURICE H. REES
Dean and Superintendent

OPERATIVE CLINICS:
Operating rooms, fifth floor.

8:30 a.m. DR. B. E. GROSSMAN.
Combined abdominal-perineal resection Carcinoma of the Colon.

9:00 a.m. DR. J. R. PLANK.
Amputation under Refrigeration Anesthesia.

10:00 a.m. DR. EUGENE S. AUER.
Hysterectomy for Fibroid of Uterus.

DRY CLINICS:
Clinical Amphitheatre, second floor, Main Building.
PROFESSOR WM. BLACK presiding

9:00 a.m. Ear, Nose and Throat presentation of cases direction of Professor Frank R. Spencer.
1. DR. HAROLD HICKEY.
   a. Lathrop Frontal Sinus Operation.
   b. Paralysis Abductor Muscles of Larynx with Granuloma.
2. DR. HERMAN I. LAFF.
   a. Case Carcinoma of Larynx.
3. DR. GUY W. SMITH.
   a. Fracture of lower jaw with amputation right ear.
   b. Osteomyelitis jaw possible Ludwig's angina.
   c. Fracture lower jaw at symphysis.
4. DR. GEO. L. PATTEE.
   a. Case of Carcinoma of Maxillary Sinus.
5. DR. W. J. BOGUE.
   a. Cured case? Osteomyelitis of Maxillary Sinus.

10:00 a.m. PROFESSOR CLARENCE B. INGRAHAM.
Mixed Pseudo-Mucinous and Serous Cystadenoma of Ovary.

10:30 a.m. DR. DOUGLAS W. MACOMBER.
a. Burn with Skin Graft.
b. Full thickness Skin Graft after excision of Facial Pigmented Mole.
c. Temporal Artery Flap to Irradiation Necrosis of Cheek.

11:00 a.m. PROFESSOR PHILLIP WORK.
Injury of Cervical Intervertebral Disc.
DR. WILLIAM R. LIPSCOMB.
Injury of Lumbar Intervertebral Disc.

11:00 a.m. Eye Clinic under direction of Professor Wm. M. Bane and Dr. R. W. Danielson. To be held in Eye Clinic. Special Eye Demonstration with Case and Motion Pictures of Eye Surgery.

PSYCHOPATHIC HOSPITAL

PROFESSOR FRANKLIN G. EBAUGH, *Director*

Clinic Room:
DR. CHARLES RYMER.

10:00 a.m. Demonstration of Electroencephalography.

A complimentary luncheon will be served in the West dining room at the Colorado General Hospital at 12:15. The laboratories and facilities of the University of Colorado School of Medicine and Hospitals will be open for inspection.

DENVER GENERAL HOSPITAL
DR. H. R. McGRAW

8:00 a.m. Dr. George Ellis.
Cholecystitis and Duodenal Ulcer; Operation—Exploratory Laparotomy.
10:30 a.m. Dr. Fred Albee.
Orthopedic Clinic (Dry). Lantern slides of Fractures of the Hip.
11:30 a.m. Dr. J. R. Plank.
Thyroidectomy.
12:00 M Complimentary Luncheon.

PRESBYTERIAN HOSPITAL
DR. M. C. WADDELL

8:00 a.m. Dr. George Kent.
1. Thyroidectomy.
2. Thyroidectomy.
Dr. Nolie Mumey.
1. Thyroidectomy.
2. Thyroidectomy.
Dr. Clarence Ingraham.
1. Cystocele.
2. Rectocele.
3. Uterine Suspension.
Dr. D. W. Hodges.
1. Hysterectomy.

NATIONAL JEWISH HOSPITAL
DR. C. J. KAUFMAN

8- 9 a.m. Dr. H. I. Laff.
Three Bronchoscopic Examinations.
9-10 a.m. Round table discussion on indications for Lobectomy and Pneumonectomy in Tuberculosis.
10-12 a.m. Dr. T. L. Howard.
Nephrectomy for Renal Tuberculosis.

ST. LUKES' HOSPITAL
DR. V. G. JEURINK

8:00 a.m. Dr. W. W. Haggart.
1. Cholecystectomy and possible Common Duct.
2. Cholecystectomy.
3. Appendectomy.
Dr. H. R. McKeen, Sr.
1. Thyroidectomy.
Dr. E. E. Taylor.
1. Ventral-hernia.
Dr. D. R. Higbee.
1. Perineal Prostatectomy.
2. Perineal Prostatectomy.
Dr. G. Heusinkveld.
1. Ovarian Cyst.

ST. ANTHONY'S HOSPITAL
DR. R. G. HOWLETT

8:00 a.m. 1. Hernia.
2. Hernia.
3. Hysterectomy.
4. Thyroidectomy.

MERCY HOSPITAL
DR. T. E. BEYER

8:00 a.m. Dr. J. E. Struthers.
1. Thyroidectomy.
2. Thyroidectomy.
Dr. A. J. Chisholm.
1. Rectal Fistula.
2. Hemorrhoidectomy.
3. Reconstruction of Colostomy.
Dr. Cuthbert Powell.
1. Hysterectomy.
Dr. T. L. Howard and Associates.
1. Suprapubic Cystotomy.
2. Hypospadius.
10:00 a.m. X-ray Conference.
Dr. Joel Sammett.

The scientific program, social functions, panel discussions, the convocation, and other entertainment left an indelible impression on all participating. The Board of Trustees of the International College of Surgeons, as well as the Officers of the United States Chapter, herewith express their appreciation to the Denver Committee and to all who participated in making this meeting the outstanding success it proved to be.

NEWS ITEMS

According to a United Press dispatch, the Russian Academy of Sciences has elected to honorary membership three Americans and two Englishmen, the first foreigners to be so honored since the Russian revolution. The Americans are **Dr. Walter Bradford Cannon, George Higginson** professor of physiology at Harvard University; **Dr. Gilbert Newton Lewis,** professor of chemistry, and **Dr. Ernest Orlando Lawrence,** professor of physics, both of the University of California. The Englishmen are **Sir Henry Hallett Dale,** president of the Royal Society and director of the National Institute for Medical Research, and **Dr. John B. S. Haldane,** professor of biometry, University College, London.

Dr. John Baldwin Walker, until his retirement in 1938, professor of clinical surgery at the College of Physicians and Surgeons, Columbia University, died on April 13, at the age of eighty-two years.

Dr. Elsie S. L'Esperance has been placed at the head of a new cancer-prevention clinic for women at the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York. She is a member of the board of managers of the hospital and is one of the founders of the Kate Depew Strang Tumor Clinic at the New York Infirmary for Women and Children.

The New York Chapter of the National Gastroenterologic Association held a special meeting to mark the eightieth birthday of Dr. Max Einhorn, emitus professor of medicine, New York Post-Graduate Medical School, Columbia University. The Rudolf Virchow Medical Society observed his birthday and he was given a testimonial dinner by the staff of the Lenox Hill Hospital, with which he has been associated for more than fifty years.

BOOK REVIEWS

The Biologic Fundamentals of Radiation Therapy, Friedrich Ellinger, M.D. With a Preface by Maurice Lenz, M.D. English Translation by Reuben Gross, M.D. 360 p. 79 fig. $5. Elsevier Pub. Co., Inc., New York, 1941.

THIS book when first published in Germany in 1935 was accorded an unusually warm reception by both radiologists and clinicians. The author considers radiation biology as the scientific foundation on which the therapeutic application of radiation must be based. Radiation is a therapeutic medium akin to medication. Ellinger speaks of a "pharmacology and toxicology of radiation," the knowledge of which enables one to use these remedies scientifically instead of relying on empirism. The mechanism and the effect of radiation on living tissues are discussed in a didactic and systematic manner. In the preface to the English edition, Maurice Lenz justly says: "No physician today can give his patients optimal care if he is lacking in knowledge of the fundamentals of radiation biology." This statement gains in significance with the steadily increased use of radiation in clinical therapy during the last decade. The book comprises the following chapters: "The Action of Roentgen Rays and Radiation of Radium;" "The Corpuscular Rays;" "Ultraviolet Light;" "Further Effects of Light;" "General Radiation Biology and Therapy." The English version of this fine work is worthy of a warm reception. Not only has the objective of the opus been fulfilled, but also has the author brought the book up to date by embodying discussions on the action of neutrons and the technic of related therapeutic methods. The book will be an asset in the library of every surgeon and physician who wishes to keep abreast with the advances on the subject discussed.

Fritz Rothbart

El Diagnostico de los Tumores Suprarenales, Octavio M. Pico Estrada, Profesor adjunto de la Facultad de Medicina, Jefe del servicio de Clinica Medica del Hospital Pirovano, Sala 8. 156 p. 4 fig. Liberia y Editorial "El Ateneo," Buenos Aires, 1940.

THE author presents a guide for the proper recognition of neoplasms of the adrenal. The extraordinary varieties of the symptoms produced may lead to confusion, and the embryologic duality and histology of the adrenal may eventuate in multiple varieties of blastoma. The clinical polymorphism is noteworthy, therefore, for purposes of orientation and to enable one to make a correct diagnosis, which may be accomplished only through a study of the symptomatology of syndromes enumerated. The author points out the local symptoms that adrenal neoplasms produce and the roentgenologic peculiarities of the same. He describes the hypertensive syndromes, as well as suprarenal-genital symptom complexes, and the syndrome known as Addison's disease. The rare forms of clinical entities accompanied by fever are thoroughly described and evaluated. The author discusses the relationship between the clinical syndromes enumerated and the histologic structure of the tumor formations in Chapter IX. He has intentionally omitted etiologic, physiopathologic and therapeutic considerations. This book is written in Spanish. It is recommended to anyone interested in this subject.

M. T.

Demonstrations of Physical Signs in Clinical Surgery, Hamilton Bailey, F.R.C.S. (Eng), Surgeon, Royal Northern Hospital, London; Surgeon and Urologist, Essex County Council; Surgeon, Italian Hospital; Consulting Surgeon, Clacton Hospital and the County Hospital, Chatham; External Examiner in Surgery, University of Bristol. 8th ed., revised. xii, 336 p. 455 fig. (many colored). John Wright & Sons, Ltd., Bristol; Simpkin Marshall, Ltd., London, 1942.

THE eighth edition of this excellent work bespeaks its popularity. The author accomplished a Herculean task in replenishing the illustrations, since the majority of the blocks have been destroyed by enemy action. The beautiful illustrations and instructive text witness the indefatigable and successful efforts of Hamilton Bailey. Many new color plates embellish the book engagingly, besides presenting more vivid clinical pictures of the subject matter discussed. The important pointers dealing with physical diagnosis, particularly of abdominal and chest injuries, are in these stressful days timely. Actual photographs of patients depicting given lesions, such as Figure 196 on Page 127, for example, indicating a rupture of the supraspinatus tendon, are most instructive. They leave an indelible impression and are of utmost didactic value. The important Chapter on the "Hand" is exceptionally well presented, stressing especially the points of maximum tenderness (Page 136), etc. Some of the more recent tests for acute pancreatitis might have been included. Perthes' test for competency of the deep venous system (femoral, popliteal veins) should have been included in Chapter 30, which deals with varicose veins. Only a gifted surgeon and a keen observer of vast clinical experiences could write so authoritative a text. The work will serve well the student, surgeon and specialist alike, and this reviewer wholeheartedly endorses the sentiment expressed dermatographically in Figure 455 on the patient's back: "There'll Always Be an England."

P. T.

Medical Clinics of North America, Volume 26, Number 3, pp. 645-995. $16 per clinic year. W. B. Saunders Co., Philadelphia and London, 1942.

THE bulk of the work here is devoted to gastrointestinal diseases. The remaining portion embraces a variety of subjects, particularly circulatory diseases. Since the appearance of the U. S. Pharmacopoeias XI and XII has brought out changes in digitalis standardization, much confusion will be avoided by reading the paper by Drs. De Graff and Batterman on "Recent Advances in Digitalis Therapy, with Particular Attention to the Use of Pure Glycosides." As usual, this issue mirrors the high standard of this publication.

M.